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<p>The purposes of this task were to study the methods of implementation by the Military Services of the Deputy Secretary of Defense's policies on the authority and responsibilities of the military program manager and to identify problems arising from their current implementation. Those policies stress the need to give the program manager the authority and responsibility necessary to accomplish his job effectively and also require minimizing the layers of authority between the program manager and the Secretary of the Military Service.</p> <p>The report contains LMI findings, conclusions, and recommendations. Our general conclusion is that the Military Services are making good progress in the implementation of the Deputy Secretary of Defense's policies with respect to the delegation of authority and assignment of responsibilities to program managers. We found that there has been an insignificant reduction in the number of layers of authority between program managers and their Service Secretaries over the past three years. In this connection, however, we did not encounter a program office the effectiveness of which was impaired because it was too low in the organizational hierarchy.</p> <p>Because of LMI's exposure to the area of program management for some period of time, the report also offers some subjective observations which are beyond the scope of the task order but which warrant some consideration.</p>			

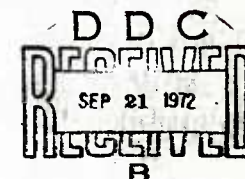
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LMI Task 72-6

August 1972



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THE PROGRAM MANAGER AUTHORITY AND RESPONSIBILITIES

Logistics Management Institute
Washington, D. C.

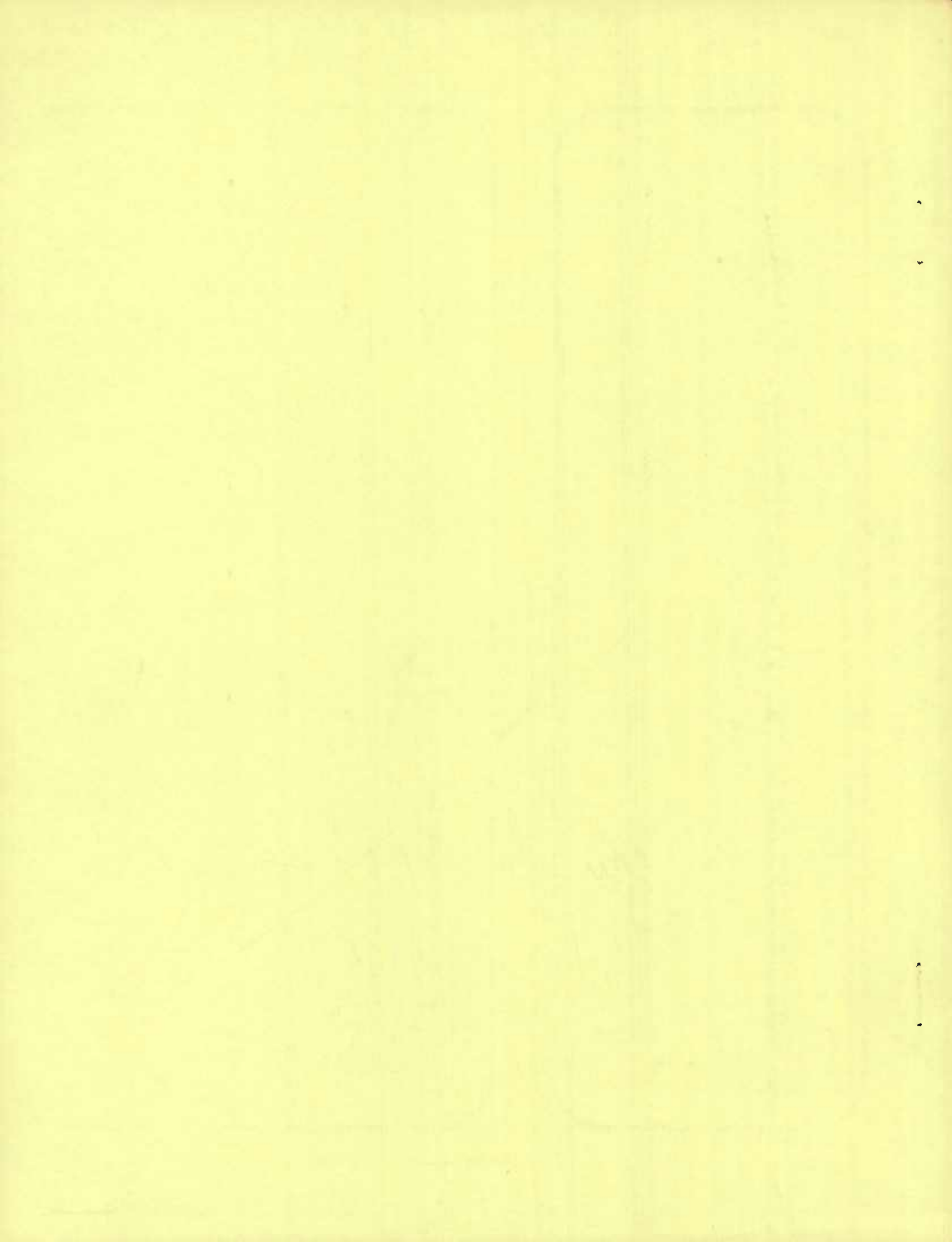
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SUMMARY

The guidance issued by the Deputy Secretary of Defense stresses the need to give the military program manager the authority and responsibility necessary to accomplish his job effectively. That guidance also requires minimizing the layers of authority between the program manager and the Secretary of the Military Service.

The Logistics Management Institute (LMI) was tasked* to study the methods of implementation of those policies by the Military Services and to identify problems arising from their current implementation. Our concern in this review had to do principally with the effects upon program offices of policies aimed at strengthening those offices and not with broader issues such as stresses imposed by the program offices upon the Department of Defense functional logistics organizations.

We were specifically tasked to review the management of the F-15, F-14, and SAFEGUARD programs and the authority and responsibilities of those programs' managers. Three additional programs were also selected for management review--the A-X, the S-3A, and the Scout Vehicle programs. Appendixes B through G to this report discuss the management of those six programs in some depth.

The pertinent policies are summarized in a memorandum of 28 May 1970 and in DoD Directive 5000.1. Copies of those two documents have been transmitted to military program managers through official channels by their respective Military Departments. DoD Directive 5000.1 has been formally implemented by the Departments of the Navy and Air Force; the implementing Army Regulation is in coordination and is scheduled for issuance in the fall of 1972.

* Appendix A is a copy of the task order.

The findings of our review are:

- There has been an insignificant reduction in the number of layers of authority between program managers and their Service Secretaries over the past three years.
- There has been a significant upgrading of the rank of the program manager over the past three years. For example, there were 22 General/Flag Officers serving as program managers under the Army Materiel Command, the Naval Materiel Command, and the Air Force Systems Command in June 1972--contrasted with 14 some three years ago--a 57% increase. During the same period of time, the total number of programs under those commands declined from 162 to 142. Put another way, General/Flag Officers headed up 9% of the programs under those commands some three years ago; in June 1972, they managed more than 15% of those programs.
- General/Flag Officer rank significantly enhances a program manager's stature with his superiors and his ability to obtain responsive support from functional organizations.
- The Military Services have made measurable progress with respect to lengthening and stabilizing the tenure of program managers over the past three years.
- The program managers have been assigned total management responsibility for their programs--as the single individual responsible for organizing, planning, directing, and controlling the program.
- With respect to the authority, or "power to command others to act or not to act," of the program manager, we found:
 - The "vertical" program office organization provides the SAFEGUARD, F-15, and A-X program managers with tighter control over key technical personnel than the Scout, F-14, or S-3A program managers enjoy.

- In some cases, organizations below the level of the chartering authority have cut program office personnel ceilings to a number lower than that previously authorized by the chartering authority.
- The working relationships between the six program managers we visited and their superiors, functional elements, and staff specialists are more effective than they were some two or three years ago.
- The responsiveness of functional, support organizations is somewhat better than it was three years ago.
- It appears that the "ility" disciplines (maintainability, reliability, Integrated Logistics Support) are receiving appropriate consideration by the program managers and are under better control than they were three years ago.
- The six program managers have adequate influence on and input to formal program planning documents.
- Generally speaking, the program managers control program Research and Development funds; in some cases, they do not completely control program office travel and overtime expenditures.
- Over the past three years, there has been a considerable relaxation of reporting and briefing requirements levied upon the program managers.
- The program managers are satisfied with their ability to control proposed engineering or design changes.
- Program office personnel usually participate in the preparation of requests for proposals and source selection activities. They believe they have satisfactory authority with respect to the contracting function, although the F-14 and S-3A program managers would prefer to have their contracting officers collocated with their program offices.

LMI's general conclusion is that, except in the area of minimizing layers of authority, the Military Services are making good progress in the implementation of the Deputy Secretary of Defense's policies with respect to the delegation of authority and assignment of responsibilities to program managers. Undoubtedly, a great deal more remains to be done in the way of formal implementation and improvement to actions already taken. We believe, however, that measurable progress has been made toward the achievement of the Deputy Secretary's objectives in this area of program management.

Our formal recommendations are:

- The Military Departments should continue the upgrading of the rank of their program managers with special emphasis upon assigning General/Flag Officers to manage their most significant programs.
- The Office of the Secretary of Defense and the Military Departments should provide program managers with special protection against the imposition by organizations below the level of the chartering authority of across-the-board personnel reductions-in-force, bumping chains, and the like.

We also suggest that the Commander, Naval Air Systems Command collocate the F-14 and S-3A contracting officers with those program offices on a trial basis.

LMI has been conducting studies in the area of DoD program management for some period of time. Because of that exposure, LMI offers some observations in the final section of the report which are beyond the scope of the task order but which may warrant some consideration. Those thoughts are not supported by quantitative data but represent our subject-

tive judgment on certain matters germane to the subject.

The observations are:

- There are too many military programs. The effect is that some of those programs will sometimes be hampered by a lack of timely, effective, and responsive support from functional organizations.
- Many of the "matrix" program management organizations are very thinly staffed--with minimum ability to push program requirements through supporting organizations. Functional organizations, in some cases, do not appear to have come to grips with the reality of program management concepts. A reduction in the number of programs would reduce extraordinary demands on functional organizations and might also permit a more liberal staffing of matrix program offices; a more extensive use of collocation of supporting functional specialists could also do much to alleviate problems created by sparse staffing of program offices.
- As a general rule, the correct organizational location for a matrix program manager is one where he reports directly to the Commander who has responsibility for the overall success of the program and who also commands the functional elements upon which the program manager relies for the great majority of his technical support.
- A program manager in a strong "vertical" program management organization, on the other hand, is in a different position. In such cases, it is entirely practical to place the program manager at an organizational level above the Commanders of outside functional organizations.
- Some program managers spend considerable time and effort preparing for and testifying at Congressional hearings. We believe it is quite appropriate to involve the program manager in such matters when they are concerned with the management, as opposed to the defense,

of the program. It is our opinion, however, that program managers should be allowed maximum time to manage their programs and that their military and civilian superiors should assume the role of program advocate at higher levels of authority and before Congressional committees.

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I. INTRODUCTION

A. BACKGROUND

The guidance issued by the Deputy Secretary of Defense stresses the need to give the military program manager the authority and responsibility necessary to accomplish his job effectively. That guidance also requires minimizing the layers of authority between the program manager and the Secretary of the Military Service.

The Military Services have implemented those policies in slightly different ways.

B. PURPOSES OF TASK

The purposes of this task were to study the methods of implementation of those policies by the Military Services and to identify problems arising from their current implementation. Our concern in this review had to do principally with the effects upon program offices of policies aimed at strengthening those offices and not with broader issues such as stresses imposed by the program offices upon the Department of Defense functional logistics organizations.

C. SCOPE OF STUDY

We were specifically tasked to review the management of the F-15, F-14, and SAFEGUARD programs and the authority and responsibilities of those programs' managers. To obtain a broader perspective, we, in coordination with the Office of the Secretary of Defense (OSD), also selected three additional weapon system acquisition programs for review. The three programs selected were the A-X (Air Force), S-3A (Navy), and the Armored Reconnaissance Scout Vehicle (Army) programs.

D. CONDUCT OF STUDY

In conducting the study, LMI:

- Reviewed pertinent literature—including reports of Congressional hearings, General Accounting Office reports, symposium proceedings, the report of the President's Blue Ribbon Defense Panel, other publications, and Department of Defense (DoD) and Military Services' directives, instructions, and regulations.
- Collected and analyzed data on military program managers from the Army Materiel Command (AMC), the Naval Material Command (NAVMAT), and the Air Force Systems Command (AFSC).
- Visited the six program offices selected for in-depth review. We developed specific discussion papers and formats for the collection of information and data from the six program managers and their key management personnel on the authority and responsibilities of the program managers. We also interviewed personnel at AMC, NAVMAT, AFSC, the Naval Air Systems Command Headquarters, and the U. S. Army SAFEGUARD Logistics Command.

During the course of the study, LMI visited 13 DoD organizations and talked with 69 individuals. We acknowledge with appreciation their participation and contributions.

E. ORGANIZATION OF REPORT

Six appendixes to this report discuss in some depth the military programs selected for management review.

The appendixes are:

- Appendix B--F-15/Joint Engine Project Office (JEPO) Program

The F-15 Program responds to an Air Force requirement for a tactical fighter which will provide the Air Force with continuing air-to-air superiority against the most modern enemy fighters.

The F-14B/F-15 Joint Engine Project consists of the development and production of both Navy and Air Force engine versions.

- Appendix C--A-X Program

The purpose of the A-X Program is to conduct a competitive prototype development leading to the acquisition of a low cost, simple aircraft to meet Air Force requirements for close air support in the post-1975 time period.

- Appendix D--SAFEGUARD Program

The purpose of the SAFEGUARD Program is to develop and deploy the SAFEGUARD Ballistic Missile Defense System and to plan and carry out a Site Defense prototype demonstration program.

- Appendix E--Scout Program

The purpose of the Armored Reconnaissance Scout Vehicle Program is the development, production, and support of a small, lightweight, lightly armored, highly mobile, agile, quietly operating vehicle with an inherent swimming capability. The Scout is designed to increase significantly the capability of U. S. forces to gain information of the enemy and terrain and to provide security from surprise for the ground combat forces.

- Appendix F--F-14/PHOENIX Program

The purpose of the F-14/PHOENIX Program is the definition, development, test and evaluation, acquisition, and initial support of the F-14/PHOENIX Weapon System. The F-14 aircraft is to be procured as an improved high performance air superiority/Fleet Air Defense fighter in the 1973-1985 time frame. The F-14 will be a two-man, supersonic, carrier based aircraft with an all-weather capability for delivery of the PHOENIX and SPARROW missiles against long and mid-range targets. It will also employ a 20 mm cannon and SIDEWINDER missiles for close-in air-to-air combat.

- Appendix G--S-3A Program

The purpose of the S-3A Program is the development, test and evaluation, production, and initial fleet support of the S-3A Weapon System. The S-3A is an advanced carrier based Anti-submarine Warfare (ASW) aircraft weapon system. The aircraft will be powered by two turbofan engines. Its highly integrated ASW avionics system is designed around a general purpose digital computer. The aircraft and its systems will be operated by a crew of four.

IMI identified certain topics as indexes which we believe provide some insight into the extent of authority delegated and responsibilities assigned to a military program manager. The discussion in each of the six appendices concentrates upon those topics and treats them in the following order:

1. Background

- Purpose of program
- Mission of program manager
- Establishment of program office

2. Delegation of Authority and Assignment of Responsibility

- Military Service's instructions and regulations
- Program manager's charter

3. Layers of Authority Above Program Manager

4. Organization of Program Office

5. Staffing of Program Office

- Rank and tenure of program manager and his deputy
- On-board personnel versus authorized allowance. Civilian and military mix.

6. Relationships with Other Organizations

- With superiors
- With functional, support organizations
- With staff specialists--the "ilities"

7. Planning, Directing, and Controlling

- Program office participation in preparation of formal program planning documents
- Extent of program office control of program funds
- Reporting and briefing requirements levied upon program office
- Program office influence with respect to proposed engineering or design changes
- Program office participation in preparation of requests for proposals and source selection activities.

Each of the six appendixes was coordinated with the program manager and his key management personnel.

The next section of this report discusses LMI general findings, conclusions, and recommendations on this task.

LMI has been conducting studies in the area of DoD program management for some period of time. Because of that exposure, we offer some observations in the final section of the report which go beyond the scope of the task order but which may warrant some consideration.

II. DISCUSSION

A. DEPUTY SECRETARY OF DEFENSE POLICIES

During the period 1969 through 1971, the Deputy Secretary of Defense and his staff devoted a great deal of attention to problems associated with DoD weapon system acquisition and ways to improve DoD policies and procedures in that area. He identified major problems and articulated new policy guidance through a variety of media--including official memoranda, DoD Directives, Congressional testimony, press conferences, publications, and speeches at joint DoD-industry symposiums and meetings.

The Deputy Secretary's policies with respect to military program managers' authority and responsibilities are summarized and set forth in one official memorandum and one DoD Directive.

The memorandum, for the Secretaries of the Military Departments and top OSD officials, is dated 28 May 1970 and is entitled "Policy Guidance on Major Weapon System Acquisition." Provisions pertinent to this LMI task are:

We have been considering within the Department, for over a year, ways by which we can improve acquisition programs for major weapon systems. Some steps have been taken which I believe are in the right direction . . . , and it is now appropriate to move ahead in a concerted effort to firmly establish additional new policies and to implement them.

The prime objective of the new policy guidance is to enable the Services to improve their management of programs. Improvement in the execution of these programs will be made to the extent the Services are willing and able to improve their management practices. The Services have the responsibility to get the job done. It is imperative that they do the job better in the future than it has been done in the past.

.....

The purpose of this memorandum is to issue broad policy guidance which is to be translated into appropriate action by all Services and Agencies in new major weapon system acquisitions.

Management

Management in the Services will be improved only to the extent that capable people with the right kind of experience and training are designated to manage these major programs--in fact all programs. In order to be effective, program managers must be given adequate authority to make decisions on major questions relating to the program both in the conceptual development stage and in the full-scale development stage. If capable people are going to be willing to undertake these important program management assignments, ways must be found to give them some incentive to do so. Program managers must be given more recognition toward career advancement in all of the Services, and good managers must be rewarded just as good operational people are rewarded.

If our people are to develop the experience necessary for program management and are to utilize their experience, they must be assigned to a given program long enough to be effective.

The overall structure of the program management function in all Services needs to be considered. Changes must be made to minimize the numerous layers of authority between the program manager and the Service Secretary.

The entire management problem needs to be addressed under these simple guidelines: put more capable people into program management, give them the responsibility and the authority and keep them there long enough to get the job done right.

.....

To the extent that the above guidance conflicts with existing DoD Directives and Instructions, the policies stated herein will govern. Since these policies should be applied immediately, I would appreciate your distributing this memorandum to key personnel, including all program managers, involved in the acquisition of major weapon systems.

I want the appropriate regulations of OSD and the Services and Agencies to be changed or cancelled to reflect these policies.

DoD Directive 5000.1 is dated 13 July 1971 and is entitled "Acquisition of Major Defense Systems". Pertinent provisions include:

Mode of Operation - Successful development, production and deployment of major defense systems are primarily dependent upon competent people, rational priorities and clearly defined responsibilities. Responsibility and authority for the acquisition of major defense systems shall be decentralized to the maximum practicable extent consistent with the urgency and importance of each program. The development and production of a major defense system shall be managed by a single individual (program manager) who shall have a charter which provides sufficient authority to accomplish recognized program objectives.

Layers of authority between the program manager and his Component Head shall be minimum. . . . The assignment and tenure of program managers shall be a matter of concern to DoD Component Heads and shall reflect career incentives designed to attract, retain and reward competent personnel.

.....

The OSD and DoD Components are responsible for program monitoring, but will place minimum demands for formal reporting on the program manager. Nonrecurring needs for information will be kept to a minimum and handled informally.

.....

The number of implementing documents will be minimized and necessary procedural guidance consolidated to the greatest extent possible.

B. IMPLEMENTATION OF POLICIES

Copies of the Deputy Secretary of Defense's 28 May 1970 memorandum were transmitted to military program managers through official channels by their respective Military Departments. Copies were held by all of the six program offices visited by LMI. Most of the program managers construed the memorandum to be their "marching orders" and immediately took actions to shape the management of their programs to policies articulated in the memorandum.

Copies of DoD Directive 5000.1 of 13 July 1971 were also transmitted to program managers in similar fashion. The program managers we interviewed said that the DoD Directive restated the policies of the 28 May 1970 memorandum and reinforced their authority to manage their programs in accordance with those policies.

DoD Directive 5000.1 was formally implemented by the Department of the Navy with the issuance of Secretary of the Navy (SECNAV) Instruction 5000.1, "System Acquisition in the Department of the Navy", 13 March 1972.* The DoD Directive is an enclosure to the SECNAV Instruction. Twenty-eight SECNAV, Office of the Chief of Naval Operations (OPNAV), and NAVMAT instructions were cancelled by the SECNAV Instruction. Fifty-five Department of the Navy related policy documents are listed in an enclosure to the SECNAV Instruction for review for policy consistency with DoD Directive 5000.1 and revision and consolidation as appropriate. The SECNAV Instruction also precluded the usual necessity for successive OPNAV and NAVMAT implementing instructions. In our opinion, the SECNAV Instruction is an unusually clear and effective formal Departmental

* Pertinent excerpts from the SECNAV Instruction appear in Appendix F, pp. 2-5.

implementation of the DoD Directive.

The Department of the Air Force formally implemented DoD Directive 5000.1 with the issuance of Air Force Regulation (AFR) 800-2, "Acquisition Management--Program Management", 16 March 1972.* The DoD Directive is an attachment to the AFR. The prior version of AFR 800-2, dated 27 July 1971, superseded AFRs 375-1, 375-2, 375-3, and 375-4--a substantial portion of previous guidance known as the Air Force "375 series" of regulations on program management. LMI believes that AFR 800-2 is a clear and effective formal Departmental implementation of DoD Directive 5000.1.

The basic Department of the Army policy regulation on program management is Army Regulation (AR) 70-17, "Research and Development--System/Project Management", 19 January 1968.** The Department of the Army advised LMI that a proposed revision of AR 70-17, formally implementing DoD Directive 5000.1, has been prepared, is in the process of coordination among Department of the Army staff elements and major commands, and is scheduled for reissuance in the fall of 1972.

Each of the Military Departments has taken many other actions and mounted special programs in consonance with weapon system acquisition and program management policies enunciated by the Deputy Secretary. The Commanding General, AMC, the Chief of Naval Material (CNM), and the Commander, AFSC summarized those actions and programs in their presentations at the DoD/National Security Industrial Association (NSIA) Symposium held in August 1971.***

* Pertinent provisions of the AFR are set forth in Appendix B, pp. 2-3.

** Relevant sections of the AR appear in Appendix E, p. 1.

*** See DoD/NSIA Symposium Proceedings, "Major Defense Systems Acquisition", 11-12 August 1971, Washington, D. C., pp. 109-141.

C. LAYERS OF AUTHORITY ABOVE PROGRAM MANAGER

1. Comparative General Data

The great majority of program managers reports to the Commanding General (CG), AMC, CNM, or the Commander, AFSC-- or to one of their subordinate Commodity Commanders, Systems Commanders, or Product Division Commanders, respectively--or to a Deputy to one of those subordinate commanders. One of the few exceptions is the SAFEGUARD System Manager, who does not report to the CG, AMC; he reports directly to the Army Chief of Staff.

The CG, AMC reports to the Army Chief of Staff, who reports to the Secretary of the Army. CNM reports to the Chief of Naval Operations (CNO), who reports to the Secretary of the Navy. The Commander, AFSC, reports to the Air Force Chief of Staff, who reports to the Secretary of the Air Force.

AMC, NAVMAT, and AFSC provided LMI with data on program managers and program offices under their command. AMC and NAVMAT data are for two points in time--June 1969 and June 1972; AFSC data are for May 1968 and June 1972. On the matter of the number of layers of authority between the program managers under those commands and the Secretary of the Service, the data indicate:

<u>Army Materiel Command</u>					
<u>June 1969</u>			<u>June 1972</u>		
<u>Layers of Authority</u>	<u>No. of Program Managers</u>	<u>% of Total</u>	<u>Layers of Authority</u>	<u>No. of Program Managers</u>	<u>% of Total</u>
2	17	26%	2	10	28%
3	49	74%	3	26	72%
	66	100%		36	100%
					<u>% Change-- 1969 - 1972</u>
					+2%
					-2%

<u>Naval Material Command</u>					
<u>June 1969</u>			<u>June 1972</u>		
<u>Layers of Authority</u>	<u>No. of Program Managers</u>	<u>% of Total</u>	<u>Layers of Authority</u>	<u>No. of Program Managers</u>	<u>% of Total</u>
2	10	16%	2	11	18%
3	52	84%	3	49	82%
	62	100%		60	100%
					<u>% Change-- 1969 - 1972</u>
					+2%
					-2%

<u>Air Force Systems Command</u>					
<u>May 1968</u>			<u>June 1972</u>		
<u>Layers of Authority</u>	<u>No. of Program Managers</u>	<u>% of Total</u>	<u>Layers of Authority</u>	<u>No. of Program Managers</u>	<u>% of Total</u>
1	1	3%	1	--	--
2	--	--	2	1	2%
3	8	23%	3	12	26%
4	25	74%	4	33	72%
	34	100%		46	100%
					<u>% Change-- 1968 - 1972</u>
					-3%
					+2%
					+3%
					-2%

LMI concluded that there has been an insignificant reduction in the number of layers of authority between program managers and their Service Secretaries over the past three years.

2. Six Programs Reviewed by LMI

Layers of authority between the program manager and his Service Secretary on the six programs reviewed by LMI are:

<u>Program Manager</u>	<u>No. of Layers</u>	<u>Identity of Layers</u>
SAFEGUARD	1	- Chief of Staff Army (Figure D-1, Appendix D, p. 4)
F-15/JEPO	2	- Commander, AFSC - Air Force Chief of Staff (Figure B-1, Appendix B, p. 5)
Scout	3	- CG, Army Tank-Automotive Command - CG, AMC - Chief of Staff Army (Figure E-1, Appendix E, p. 5)
F-14/PHOENIX	3	- Commander, Naval Air Systems Command - CNM - CNO (Figure F-1, Appendix F, p. 9)
S-3A	3	- Commander, Naval Air Systems Command - CNM - CNO (Figure G-1, Appendix G, p. 3)
A-X	4	- Deputy for Systems, Aeronautical Systems Division - Commander, Aeronautical Systems Division - Commander, AFSC - Air Force Chief of Staff (Figure C-1, Appendix C, p. 3)

The SAFEGUARD System Manager enjoys an organizational location which, for a program manager, is unique in the Department of the Army. He reports directly to the Army

Chief of Staff and is a member of the Office of the Chief of Staff. All other Army program managers report to the CG, AMC or to one of his subordinate commands.

The F-15/JEPO System Program Director* also enjoys a unique organizational location for a program manager in the Air Force, in that he is the only program manager who reports directly to the Commander, AFSC. All other AFSC program managers report to subordinate AFSC commands.

LMI concluded that a minimal organizational layering--as in the SAFEGUARD and F-15 programs--is a tremendous advantage for a program manager. Direct access to the Army Chief of Staff or the Commander, AFSC--and a consequent easy entree to the Service Secretary--immeasurably increase the ability of a program manager to get the job done effectively. A high-level organizational position enables a program manager (and his staff) to resolve problems and get decisions made most expeditiously.

We recognize that it is practicable to place only a very few program managers at the SAFEGUARD or F-15 organizational level. Where a program is of most vital national significance, with difficult coordination and technical problems, and unusually heavy funding, however, we believe its organizational location should be carefully considered--with a view to reducing the layers of authority to the minimum consistent with such considerations as span of control, location of support elements, and program procurement plans.

* The Air Force term, "System Program Director," is synonymous with "program manager" as used by OSD and in this report.

None of the other four program managers LMI interviewed (A-X, Scout, F-14, and S-3A) voiced any serious objection to his organizational location. The two Navy program managers (F-14 and S-3A) stated that they did not believe there were too many layers of authority between them and the Secretary of the Navy and advised that reporting directly to the Commander, Naval Air Systems Command (NAVAIR) gives them direct access to their NAVAIR functional, supporting elements. The Scout Program Manager does not find layering a problem, except in the area of program office personnel, where Army Tank-Automotive Command-imposed limitations upon the personnel spaces the program office may fill have kept on-board personnel below allowances previously authorized. The A-X Program Manager finds that organizational layering means that presentations must be given one more time but considers that to be a minor problem.

D. RANK OF PROGRAM MANAGER

1. Comparative General Data

With respect to the rank or grade of program managers, data provided LMI by AMC, NAVMAT, and AFSC indicate:

<u>Army Materiel Command</u>					
<u>June 1969</u>			<u>June 1972</u>		
<u>Rank/Grade</u>	<u>No.</u>	<u>% of Total</u>	<u>Rank/Grade</u>	<u>No.</u>	<u>% of Total</u>
Brig. Gen.	4	6%	Brig. Gen.	7	19%
GS-17	--	--	GS-17	1	3%
Colonel	33	50%	Colonel	21	58%
GS-15	--	--	GS-15	1	3%
Lt. Col.	27	41%	Lt. Col.	6	17%
Major	2	3%	Major	--	--
	66	100%		36	100%

% Change--
1969 - 1972

+13%

+ 3%

+ 8%

+ 3%

-24%

- 3%

<u>Naval Material Command</u>					
<u>June 1969</u>			<u>June 1972</u>		
<u>Rank/Grade</u>	<u>No.</u>	<u>% of Total</u>	<u>Rank/Grade</u>	<u>No.</u>	<u>% of Total</u>
RADM	5	8%	RADM	7	12%
GS-16	1	2%	GS-16	--	--
CAPT	42	68%	CAPT	43	72%
COL*	3	5%	COL*	2	3%
GS-15	1	2%	GS-15	--	--
CDR	9	14%	CDR	7	12%
GS-14	--	--	GS-14	1	2%
LCDR	1	2%	LCDR	--	--
	62	101% **		60	101% **

% Change--
1969 - 1972

+4%

-2%

+4%

-2%

-2%

-2%

+2%

-2%

Air Force Systems Command

<u>May 1968</u>			<u>June 1972</u>		
<u>Rank/Grade</u>	<u>No.</u>	<u>% of Total</u>	<u>Rank/Grade</u>	<u>No.</u>	<u>% of Total</u>
Gen.***	1	3%	Gen.	--	--
Maj. Gen.	--	--	Maj. Gen.	2	4%
Brig. Gen.	4	12%	Brig. Gen.	6	13%
P.L. 313	1	3%	P.L. 313	--	--
Colonel	23	67%	Colonel	33	72%
Lt. Col.	3	9%	Lt. Col.	5	11%
Major	2	6%	Major	--	--
	34	100%		46	100%

% Change--
1968 - 1972

-3%

+4%

+1%

-3%

+5%

+2%

-6%

* Marine Corps Colonel.

** Does not add to 100% due to rounding.

*** The Commander, AFSC acted as Program Manager for the Manned Orbiting Laboratory Program.

As the above data show, there were 22 General/Flag Officers serving as program managers in June 1972--contrasted with 14 in the prior periods--a 57% increase. During the same periods of time, the total number of programs under AMC, NAVMAT, and AFSC declined from 162 to 142--a 12% decrease. Put another way, General/Flag Officers headed up 9% of the programs under AMC, NAVMAT, and AFSC in the prior periods; in June 1972, they managed more than 15% of those programs. The number of Colonel/Captain program managers remained about the same (99 in June 1972 versus 101 in prior periods).

LMI concluded that there has been a significant up-grading of the rank of the program manager over the past three years.

With respect to the tenure of program managers (period of time from assignment to detachment), AMC program management personnel advised LMI that current AMC policy is that a program manager will be assigned for a minimum of three years--with four years as a desirable objective. Data provided LMI by AMC indicate that the average anticipated tenure of AMC's present 36 program managers is 38 months.

NAVMAT personnel advised LMI that, as of June 1972, the average estimated tenure of a NAVMAT program manager on a Navy program is 29 months.

AFSC had no detailed data on the tenure of AFSC program managers as of June 1972 but advised LMI that its current policy is to assign program managers to the job for three to five years--or until a significant milestone is reached--on major programs.

In July 1969, LMI reported:

It is visionary to expect that project managers will always complete a full three year tour on a project. At the same time, however, analysis of Army project manager assignments shows that the average tenure of a project manager is only 20 months and may indicate a problem of too frequent turnover. Similar data were not readily available in the Navy or in the Air Force. Data available in specific project offices led us to believe that the average tenure of a project manager is between two and three years in those Departments.

LMI concluded that the Military Departments have made measurable progress with respect to lengthening and stabilizing the tenure of program managers over the past three years.

2. Six Programs Reviewed by LMI

The rank/grade and date of assignment of the program managers and their deputies on the six programs reviewed by LMI are:

<u>Program</u>	<u>Program Manager</u> <u>Rank--Date Assigned</u>	<u>Deputy Program Manager</u> <u>Rank/Grade--Date Assigned</u>
SAFEGUARD	Lt. Gen. April 1971	Maj. Gen. November 1967
F-15/JEPO	Maj. Gen. July 1969	Colonel July 1970
F-14/PHOENIX	RADM July 1971	GS-15 December 1968
S-3A	RADM September 1968	GS-15 November 1970
A-X	Colonel May 1970	Colonel July 1971
Scout	Colonel July 1969	GS-15 April 1967

* LMI Report, Project Management in the DoD--A Brief Survey, LMI Task 69-28A, July 1969, Washington, D. C., p. 17.

The above data indicate that, as of June 1972, the six program managers have served as such for an average of 27 months; their deputies have served for an average of 35 months. The data confirmed our conclusion that the Military Departments have made measurable progress with respect to lengthening and stabilizing the tenure of military program managers over the past three years.

LMI found that General/Flag Officer rank significantly enhances a program manager's stature with his superiors and his ability to obtain responsive support from functional organizations. We believe the prestige and authority of a General/Flag Officer program manager, simply by virtue of that rank, are greater than those of a Captain/Colonel program manager by many orders of magnitude. The authority and prestige implicit in General/Flag Officer rank increase a program manager's ability to overcome roadblocks, resolve problems, and deal with heads of supporting organizations as peers.

LMI believes that the trend toward upgrading the rank of military program managers should be continued--with special emphasis upon designating General/Flag Officers as managers of the most significant programs.

Recommendation No. 1 -- The Military Departments should continue the upgrading of the rank of their program managers with special emphasis upon assigning General/Flag Officers to manage their most significant programs.

E. PROGRAM MANAGER AUTHORITY AND RESPONSIBILITY

In this report, we use the terms "authority" and "responsibility" in their classical sense:

Although the term "authority" is used in various ways by management experts, the standard definition is "legal or rightful power, a right to command or to act." Applied to the managerial job, authority is the power to command others, to act or not to act in a manner deemed by the possessor of the authority to further enterprise or departmental purpose.

Viewed internally with respect to the enterprise, responsibility may be defined as the obligation of a subordinate, to whom a duty has been assigned, to perform the duty.

The entire process of delegation involves the assignment of tasks, the delegation of authority for accomplishing these tasks, and the exaction of responsibility for their accomplishment.

With respect to the assignment of tasks to and the exaction of responsibility for their accomplishment from the managers of the six programs LMI reviewed, a review of the Military Departmental Directives and the program managers' charters** leaves no doubt that those program managers have total management responsibility for their programs. Although the language may vary slightly from case to case, the directives and charters generally state that the program manager is the single individual responsible for organizing, planning, directing, and controlling the program.

The remainder of this section discusses the extent to which authority, or "power to command others to act or not to act", has been delegated to those six program managers.

* Koontz, Harold, and O'Donnell, Cyril, Principles of Management: An Analysis of Managerial Functions. New York: McGraw-Hill, Inc., 1968, pp. 59-67.

** See Appendixes B through G, Section 2, "Delegation of Authority and Assignment of Responsibility."

F. ORGANIZATION AND STAFFING

The organizational location of the six program managers has already been discussed in this report (pages 13-15).

As of April-June 1972, staffing of the six program offices was as follows:

<u>Program Office</u>	<u>Staffing</u>	
	<u>On-Board</u>	<u>Authorized</u>
SAFEGUARD System Organization:		
SAFEGUARD System Office	156	168
U. S. Army SAFEGUARD System Command	1253	1321
U. S. Army SAFEGUARD System Evaluation Agency	527	613
	1936	2102
F-15/JEPO System Program Office	246*	245
A-X System Program Office	75**	100
Scout Project Management Office	35	37
F-14/PHOENIX Project Management Office	20	22
S-3A Project Management Office	15	16

The SAFEGUARD, F-15, and A-X program offices are examples of the "vertical" approach to organization for program management. Under the "vertical" organizational philosophy, the program office is large and relatively self-sufficient. A very considerable capability is maintained "in-house" within the program office, and reliance upon outside functional, support organizations is much less than it otherwise would be.

* Collocated personnel represent 115 of the on-board total.

** Collocated personnel comprise 41 of the on-board total.

In contrast, the Scout, F-14, and S-3A program offices are examples of the "matrix" approach to organization for program management. Under the "matrix" organizational philosophy, the program office is austere staffed and relies upon functional, support organizations for virtually all of its specialized support.

Most of the major Air Force program offices are vertical organizations. Most of the Army and Navy program offices are matrix organizations--although there are a few exceptions (SAFEGUARD (Army) and Strategic Systems Project Office (Navy)).

IMI found that the vertical program office organization provides the SAFEGUARD, F-15, and A-X program managers with tighter control over key technical personnel and more "power to command others to act or not to act" than the Scout, F-14, or S-3A program managers enjoy. For example, the SAFEGUARD System Manager has been delegated authority to authenticate correspondence "BY DIRECTION OF THE CHIEF OF STAFF" for SAFEGUARD System matters and has issued several formal task assignments to Major Field Commands of the Army; the F-14 and S-3A program managers do not have authority to issue "Instructions" or "Notices" in the Navy Directives System. The SAFEGUARD System Organization has been designated a Procuring Activity of the Army in the Armed Services Procurement Regulation, and the U. S. Army SAFEGUARD System Command acts as the single contracting office for the SAFEGUARD System and maintains an almost complete in-house contracting capability. The F-15 and A-X contracting officers are also integral to their program offices. The contracting officers for the Scout, F-14, and S-3A programs, on the other hand, are not in or collocated with the program offices. We do not believe it matters significantly whether key technical personnel are an integral part of the

program office or collocated with it. In either case, such personnel are under the authority of the program manager and have a sense of belonging to the program.

Some of the disadvantages usually associated with vertical program management organizations are that they are expensive in terms of personnel, they fragment the functional, supporting organizations, and they tend to foster duplication of technical effort. In some cases, extremely powerful vertical organizations have produced more significant disadvantages--in the form of severe, negative impacts upon the total functional logistics system of a Military Service. Some of those negative impacts have manifested themselves in the form of ignoring established service supply doctrine and stockage, spare parts, and standardization policies.

Some of the merits of matrix organizations, as employed on the Scout, F-14, and S-3A programs, are that they are less disruptive to the functional, supporting organizations, they permit greater specialization, and they tend to minimize technical duplication. Some of the deficiencies of matrix organizations are that they do not provide the program-oriented emphasis necessary to accomplish program tasks as expeditiously as might be desired, they make it more difficult to pinpoint responsibility, and they do not enjoy the high degree of program motivation the vertical organizations have.

LMI believes that there is no one best way to organize for program management which could be used on every program. The organizational arrangement for management of a specific program should be tailored to that program's management needs. As noted by the Blue Ribbon Defense Panel:

The choice of either a vertical organization or a matrix organization for all program management is not a

feasible solution to program management deficiencies, for each organizational type has its benefits and liabilities. The vertically organized, all-on-one-payroll organization has the best record of success in development programs with a high degree of urgency, concurrency, technical span and cost. It prospers at the expense of functional organization, however, and there are practical limitations on the total number of vertical organizations which can be manned with qualified personnel and managed through an ad hoc or special reporting relationship outside the normal chain of organization.

The above notwithstanding, LMI believes that there is potential danger in too austere a staffing of a program office. As we reported in 1969:

A project office does not need to be manned by a large number of people, but it can become so small that it operates at a disadvantage. For example, a certain minimum number of people is required to provide the necessary capability to monitor the response of functional organizations to project requirements. It is not enough simply to lay the requirement on the functional activity; there must also be a capability to "ride herd" on the requirement to be sure that timely and effective action is being taken.**

An impression LMI received during its review of the F-14 and S-3A program offices was that those two offices are very thinly staffed--with minimum "back-up" capability. The F-14 Program Manager commented to LMI: "We do not have an effective 'follow-up' capability in the program office. The program could profitably utilize one officer solely for the purpose of following-up upon and expediting supporting organizations." The S-3A Program Manager said: "Previously approved but vacant S-3A Program Office billets have disappeared, and I could utilize

* Report to the President and the Secretary of Defense on the Department of Defense, Blue Ribbon Defense Panel, 1 July 1970, Washington, D. C., p. 81.

** LMI Report, Project Management in the DoD--A Brief Survey, op. cit., p. 28.

a few more personnel." Each of the two Navy program managers also stated that he could keep his contracting officer busy 100% of the time and would prefer to have the contracting officer collocated with the program office.

LMI believes that collocation of key technical personnel with the program office--where such key personnel can be justified and are desired by the program manager--offers significant advantages, and we suggest that the Commander, NAVAIR, as a minimum, collocate the F-14 and S-3A contracting officers with those program offices on a trial basis.

Personnel ceilings for the F-14 and S-3A program offices are controlled by the Office of the Deputy for Plans and Programs, and Comptroller, NAVAIR, and the NAVAIR Organization and Manpower Management Office. Personnel ceiling restrictions or cut-backs impact both the program offices and the NAVAIR functional elements which support the programs.

In the case of the Scout Program, the U. S. Army Tank-Automotive Command (TACOM) controls the number of personnel the Scout Program Office is permitted to have. TACOM-imposed limitations upon the personnel spaces the Scout Program Office may fill have kept on-board personnel below allowances previously approved by the Army Materiel Command and higher authority, despite the fact that the program office could fund total authorized personnel requirements from its Research and Development (R&D) funds. This personnel problem could become even more acute if the Scout Program Office is not permitted to build up to its projected authorized strength of 46 people by 1975 (it is now authorized 37 personnel).

LMI believes the cutting of program office personnel ceilings by organizations below the level of the chartering authority to be inconsistent with the concepts of program management.

Recommendation No. 2 -- The Office of the Secretary of Defense and the Military Departments should provide program managers with special protection against the imposition by organizations below the level of the chartering authority of across-the-board personnel reductions-in-force, bumping chains, and the like.

G. RELATIONSHIPS WITH OTHER ORGANIZATIONS

1. With Superiors

LMI found that all of the six program managers we met with enjoy effective, close working relationships with their immediate Commanders. Army, Navy, and Air Force program managers are authorized to use a direct channel of communication to higher-level Commanders and to the Secretary of their Service for the purpose of reporting appropriate problems to any level. In the Air Force, for example, this direct channel of communication is termed the "Blue Line Channel of Communication". As a practical matter, however, program managers rarely use such direct channels.

As one would expect, we found that the program managers at the higher organizational levels (SAFEGUARD and F-15) meet more frequently with their Service Chief of Staff and Secretary than do the program managers organizationally located at lower levels. The F-14 Program Manager advised LMI, however, that he has "as required" contacts with the Navy Secretariat and that the Secretary of the Navy has called him directly on some program matters. The S-3A Program Manager said that the S-3A Program has been supported by the Navy Secretariat and has enjoyed the personal, continuing interest of the former Under Secretary of the Navy, now the Secretary of the Navy. It appears that none of the six program managers is encountering any serious problems in his relationships with his superior commanders and Service Secretary.

2. With Functional, Support Organizations

The responsiveness of functional, support organizations is considered by the program managers to be somewhat better now than it was three years ago.

As could be expected, we found that the most effective and responsive support is provided in those cases where the technical specialists are assigned to or collocated with the program office (SAFEGUARD, F-15, and A-X). In the other cases, the program manager must rely upon memoranda of agreement or his Command's regulations spelling out the responsibilities of functional elements. Those program managers do not hesitate to go to their Commanders or to the heads of functional elements, however, when they consider the functional support for their programs to be unresponsive.

The program managers have varying degrees of influence with respect to officer efficiency reports and civilian performance ratings on functional personnel. Here again, the SAFEGUARD, F-15, and A-X program managers have a greater influence than the Scout, F-14, and S-3A program managers have.

The F-14 Program Manager expressed some concern over the inordinate time it takes to get a paper processed and said that it is difficult to instill in functional personnel the same degree of enthusiasm or sense of urgency which program office personnel have for the program. The S-3A Program Manager advised LMI that functional support of the S-3A Program has usually been responsive to program requirements but that it has varied from excellent to poor in certain areas. The Scout Program Manager said that he receives effective support from TACOM functional elements. The SAFEGUARD, F-15, and A-X Program managers are generally satisfied with the support they are receiving from functional organizations.

3. With Staff Specialists--the "Ilities"

The program managers advised LMI that, in the past, staff specialists and "ility" disciplines (maintainability, reliability, Integrated Logistics Support) at levels of authority above the program manager within the Services and OSD had sometimes imposed unreasonable requirements upon them and caused some program disruption and delay.

They also stated, however, that over the last two or three years, the Deputy Secretary's message seems to have influenced those staff specialists and the program managers are not now often subjected to such unreasonable requirements. To the contrary, the program managers usually find the staff specialists and "ility" disciplines helpful--with recommendations which are "suggestive" in nature.

It appears to LMI that the "ilities" are receiving appropriate consideration by the program managers and are under better control than they were three years ago.

There are still some papers (such as financial documents) which must go through many layers of authority, and they travel a slow and tortuous path. Generally speaking, however, the relationships between program managers and staff specialists have improved and become more effective over the past three years. The program managers find that they can usually resolve potential problems in this area by dealing directly with the top official of the appropriate staff element. As a matter of policy, a program manager usually finds it desirable to keep appropriate staff elements informed on program progress--to insure their continued support of the program.

H. PLANNING, DIRECTING, AND CONTROLLING

1. Formal Plans

LMI found that the six program offices prepared or participated in the development and processing of such documents as the:

- Requirements Directive (Qualitative Materiel Requirement, Specific Operational Requirement, or Requirements Action Directive)--except in the case of the A-X Program, where the directive was prepared prior to the establishment of the program office.
- Technical Development Plan.
- Program Master Plan (System Package Plan, Project Master Plan, or System Development Plan).
- Advance Procurement Plan.
- Development Concept Paper.

The program managers believe they have adequate influence on and input to such formal planning documents.

2. Control of Funds

The six program managers control their program R&D funds. On the Scout and S-3A programs, there have been some funding cuts or deferrals made at higher levels, but such actions have not seriously impacted those programs.

The F-15, A-X, SAFEGUARD, and Scout program managers have complete control of funding for program office personnel, travel, and overtime. The F-14 and S-3A program managers must obtain approval of program office travel and overtime expenditures from the Office of the NAVAIR Deputy for Plans and Programs, and Comptroller.

3. Reporting and Briefing Requirements

LMI found that, over the past three years, there has been a considerable relaxation of reporting and briefing requirements levied upon program managers.

The major current recurring report requirement is the Selected Acquisition Report (SAR)--prepared quarterly. The SAR reporting requirement presents no difficult problems.

Currently, the major briefing requirement is a periodic briefing of higher-level officials in the appropriate Service (in the Air Force, for example, there is a quarterly Program Assessment Review (PAR)). The A-X Program Manager makes the quarterly PAR presentation four or five times. Scout Program formal briefings at AMC are preceded by dry runs before the CG or Deputy CG, TACOM, and represent the TACOM command position when presented to the CG, AMC. The SAFEGUARD System Manager personally briefs the Secretary of the Army each month on SAFEGUARD Program progress. The S-3A Program Manager stated that there has been a dramatic reduction in briefing requirements as the result of the Deputy Secretary's policies; previously, there were heavy, formal, stylized briefing requirements preceded by a series of dry runs, but those requirements have been replaced by informal, "as needed" meetings.

LMI concluded that current briefing requirements levied on program managers are not inordinate. Program managers often volunteer to give briefings--to keep DoD officials up to date on the program and to maintain their support.

4. Changes

LMI found that program managers are satisfied with their ability to control proposed engineering or design changes.

Within the constraints of their charters and Development Concept Paper thresholds, the program managers have authority to make trade-offs and approve proposed changes. The SAFEGUARD Configuration Control Board is located at the U. S. Army SAFEGUARD System Command, and its recommendations, above approval thresholds established by the SAFEGUARD System Manager, are forwarded to the System Manager for approval. The F-14 and S-3A program managers must insure that funding is available for proposed changes and approve them before they are presented to the NAVAIR Configuration Change Control Board; their control of funding provides them effective control over proposed changes.

5. Contracting

LMI found that program office personnel usually prepare or participate in the preparation of requests for proposals. The program managers and some of their key personnel are usually members of Source Selection Evaluation Boards.

The program managers believe they have satisfactory authority with respect to the contracting function, although, as already noted, the F-14 and S-3A program managers would prefer to have their contracting officers collocated with their program offices.

I. GENERAL CONCLUSION

LMI's general conclusion is that, except in the area of minimizing layers of authority,* the Military Services are making good progress in the implementation of the Deputy Secretary of Defense's policies with respect to the delegation of authority and assignment of responsibilities to program managers. Un-

* See our observations on the organizational location of program managers in the final section of the report, pp. 37-39.

doubtedly, a great deal more remains to be done in the way of formal implementation and improvement to actions already taken. We believe, however, that measurable progress has been made toward the achievement of the Deputy Secretary's objectives in this area of program management.

III. OTHER OBSERVATIONS

LMI has been conducting studies in the area of DoD program management for some period of time.* Because of that exposure, we offer some observations which are beyond the scope of the task order but which may warrant some consideration. These thoughts are not supported by quantitative data; they represent our subjective judgment on certain matters germane to the subject of program management.

A. NUMBER OF MILITARY PROGRAMS

In July 1969, we reported:

It has been intimated before in this memorandum that there may be too many formal projects in the DoD. Charters are established at very high levels. If the number of projects is to be kept within manageable limits, those levels must exercise restraint.

Projects compete for resources with each other and with functional organizations. As the number of projects increases, either quality of management of the most important programs will suffer or else the smaller programs and the functions will be very "thin" in expertise.

There was some comment that the dollar criteria for establishing major systems projects are unrealistic. The amounts are too low for identification of those programs which justify project management because of their size alone.**

* Since 1962, LMI has conducted more than 20 studies dealing with weapon system acquisition and support and program management. Some of the programs reviewed include the TITAN II, POLARIS, FDL Ship, SAFEGUARD, and SANGUINE. We have also studied specialized areas of weapon system management such as provisioning, Life Cycle Costing, engineering and design change management, initial support, and standardization. Also, see LMI reports: Briefings on Defense Procurement Policy and Weapon Systems Acquisition, LMI Task 70-4, December 1969, AD No. 709974 and Introduction to Military Program Management, LMI Task 69-28, March 1971, U. S. Government Printing Office, Washington, D. C.

** LMI Report, Project Management in the DoD--A Brief Survey, op. cit., pp. 34-35.

We have the same impression today.

It is true that there are fewer programs under AMC, NAVMAT, and AFSC now than there were some three years ago (142 today versus 162 then). That reduction in total programs was caused by AMC's dramatic decline from 66 programs in June 1969 to 36 in June 1972. AFSC programs increased from 34 in May 1968 to 46 in June 1972. NAVMAT programs remained about the same--62 in June 1969 and 60 in June 1972. It would be instructive to inquire into the why and how of the AMC reduction in number of programs. Has that reduction adversely impacted upon the acquisition programs which were disestablished? Is the functional support of the current programs a great deal more responsive now than when there were 66 programs?

It is also true that the dollar criteria for major programs have been doubled (now \$50 million RDT&E or \$200 million production costs versus \$25 million and \$100 million, respectively). It is probably too soon to determine what effect those increased dollar criteria will have in reducing the total number of programs.

We believe other criteria often may be more important than dollar criteria and should be given careful consideration in deciding whether to establish an activity as a program.*

Our subjective judgment is that there are too many DoD military programs today. The effect is that at least some of those programs will sometimes be hampered by a lack of timely, effective, and responsive support from functional organizations.

* Some 10 factors are listed in Appendix E to the Report to the President and the Secretary of Defense on the Department of Defense, Blue Ribbon Defense Panel, op. cit., p. 25.

B. STAFFING OF MATRIX PROGRAM MANAGEMENT ORGANIZATIONS

Related to the above observation is another matter--the staffing of matrix program management organizations.

In our July 1969 report, we stated:

The problem of initial staffing is a reflection in part of the total staffing problem. Project offices, like all other offices, must struggle for ceiling allocations, and we found some cases (particularly in the Navy) where staff allotments were substantially lower than management thought to be a reasonable minimum. Indeed, there is some doubt that project offices get any preferential treatment in spite of their "preferred place" in the management organization of their activity command structure. It was noted by several project managers that a staff adequate to coordinate with supporting, functional organizations was not enough; what was needed was "muscle" to push the project's requirements through and to plug the holes created by failure or inability of the supporting organization to complete its work on time.

We have already mentioned our impression that the F-14 and S-3A program offices are very thinly staffed--with minimum "back-up" capability (page 24). A summary of personnel in Navy Designated Project Offices, as of January 1972, indicates that 20 of the 60 NAVMAT program offices had fewer than 10 personnel on board.** We do not have similar data for AMC or AFSC program offices.

* LMI Report, Project Management in the DoD--A Brief Survey, op. cit., pp. 22-23.

** Navy Designated Projects--Summary of Personnel on Board, NAVMAT, Washington, D. C., January 1972.

The point is that functional organizations, in some cases, do not appear to have come to grips with the reality of program management concepts. Those organizations must expect to be adversely impacted to some extent by the necessity for certain key functional personnel to be integral to or collocated with the program offices; that is the price which must be paid for the exploitation of exceptional program management techniques.

A significant reduction in the total number of programs would lighten the load on functional organizations and might permit a more liberal staffing of some matrix program offices.

A more extensive use of collocation of supporting functional specialists could also do much to alleviate problems created by sparse staffing of program offices. In addressing problems arising from the divided authority of the program manager and the functional supervisor of supporting personnel, a Blue Ribbon Defense Panel staff report observed:

Both industry and government have used apparently simple techniques to overcome some of these problems. Collocation of members of the program team under one roof is one of the most effective. This usually gives the program an esprit de corps, a sense of belonging, and a common goal which will reduce conflicts with functional duties.*

Our judgment is that if a weapon system acquisition program is not important enough to warrant strong, timely, and effective support from functional organizations (including collocation of key technical personnel when they can be justified and when the program manager wants them), it is not important enough to be designated as a military program at all.

* Appendix E to the Report to the President and the Secretary of Defense on the Department of Defense, op. cit., p. 30.

We are also of the conviction that the burden of proof should be upon the functional organization to demonstrate that the program manager cannot justify collocation in each case-- rather than vice versa. We believe this predilection to be especially valid in the case of the program's contracting officer. We tend to agree with a senior civilian in an Air Force program office, who queried: "If there were three people in a program office, shouldn't they be the program manager, a contracting officer, and a secretary?"

C. ORGANIZATIONAL LOCATION OF MATRIX PROGRAM MANAGERS

Another LMI observation is on the subject of organizational layers of authority above the matrix program manager.

We have already noted in this report that none of the matrix program managers we interviewed (Scout, F-14, and S-3A) voiced any serious objection to his organizational location (page 15). They recognize the advantage implicit in reporting to a Commander who also commands the functional elements upon which they rely for the vast majority of their technical support.

That organizational location gives them direct access to such functional elements and to their Commander, who can expeditiously resolve potential problems.

As we noted in June 1969:

Good working relationships with functional activities are critical to project success. Rarely is it practical to bring all the required functional specialists into a project office. The project manager must rely on functional specialists outside the project, and if he is not able to call upon the appropriate ones and they are not motivated to work in concert with him, the project is in jeopardy. It is possible for project management to be too remote from functional support, to have insufficient status to

obtain adequate cooperation, or to be so situated as to be considered a potential threat to functional managers.*

The Commander to whom a program manager reports retains responsibility for the overall success of the program; the task of managing the program is assigned to the program manager, but his Commander cannot delegate total responsibility for the program. For that reason, that Commander has a close and continuing interest in program progress and problems. He can and does help the program manager. As one Flag Officer observed: "The bypassing of the immediate Commander, who provides help and competent direction, is a mistake." As a matter of fact, program managers seldom bypass their immediate Commanders and rarely use an expeditious means of communication (such as the "Blue Line Channel") to levels of authority above such Commanders. It usually just doesn't work that way in a military organization.

Our subjective judgment, then, is that, as a general rule, the correct organizational location for a matrix program manager is one which has him reporting directly to the Commander who has responsibility for the overall success of the program and who also commands the functional elements upon which he relies for the great majority of his technical support.

A program manager in a strong vertical program management organization, on the other hand, is in a somewhat different position. He has at his disposal in his immediate office (integral or collocated) sufficient technical expertise so that he does not have near-total reliance upon outside supporting organizations for functional support. In such cases (SAFEGUARD, F-15, and the Strategic Systems Project are examples), it is entirely

* LMI Report, Project Management in the DoD--A Brief Survey, op. cit., p. 5.

practical to place the program manager at an organizational level above the Commanders of outside functional organizations.

D. PROGRAM MANAGER'S ROLE IN DEFENDING PROGRAM

In 1969, we noted that higher authority sometimes called upon program managers and their key subordinates for tasks which do not lie within their charter, knowledge, or expertise.

Primary among such tasks mentioned was justification of the total program. Project managers believe that higher authority should present and defend the programs to OSD, BuBud, Congress, and the public. They believe that such activity is not a proper role of project people, who should be left to run the project.*

During this task, LMI observed that some of the program managers we interviewed devoted considerable time and effort preparing for and testifying at Congressional hearings pertaining to their programs.

We believe that it is quite appropriate to involve the program manager in such matters when the subject concerns the management, as opposed to the defense, of the program. It is our opinion that it is someone else's job to defend the program at higher levels of authority within the DoD and before Congressional committees. Program managers should be allowed maximum time to manage their programs. Their military and civilian superiors, we believe, should assume the role of program advocate.

*Ibid., p. 34.

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ASSISTANT SECRETARY OF DEFENSE
Washington, D. C.

Installations and Logistics

DATE: 2 AUG 1971

TASK ORDER SD-271-162
(Task 72-6)

1. Pursuant to Articles I and III of the Department of Defense Contract No. SD-271 with the Logistics Management Institute, the Institute is requested to undertake the following task:

A. TITLE: The Program Manager Authority and Responsibilities

B. BACKGROUND: The policy guidance issued by the Deputy Secretary of Defense stresses the need to delegate the necessary authority and responsibility to the program manager to effectively accomplish the job. The policy also requires minimizing the layering of authority levels between the program manager and Secretary of the Service. While the management of the F-15 Program has been established as a model for implementation, the three services implement the policy in slightly different ways. The study will be conducted to determine the usefulness of implementation and the problems arising from the current implementation.

C. SCOPE OF WORK: Review the management of representative weapon system programs including the F-15, F-14 and SAFEGUARD Programs, particularly the authority and responsibilities of the program managers. The study will include:

1. The determination of the differences in responsibilities and authority delegated to the program managers, relating these to the rank of the program manager, the chain of command and the reporting levels above the program manager.
2. An analysis of the reasons for these differences.

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3. A determination of the merits or deficiencies of each program's implementation, and
4. Recommended changes or refinements in the policy guidance to improve the management of specific program manager implementation or improvement to the three Service operations.

2. SCHEDULE: A final report will be submitted by 31 August 1972.*

/s/ Glenn V. Gibson

ACCEPTED /s/ William F. Finan

DATE 3 August, 1971

* As extended from 31 July 1972.

F-15/JEPO PROGRAM

1. Background

a. Purpose

The purpose of the F-15 Program is set forth in an Air Force Systems Command (AFSC) Program Action Directive (PAD) of 9 July 1969:

The F-15 Program responds to an Air Force requirement for a tactical fighter which will provide the Air Force with continuing air-to-air superiority against the most modern enemy fighters; it will also have certain inherent air-to-ground capability. The technologies on which it is based and the operational threats and problems it is intended to solve are subject to rapid change. Thus, the F-15 will be a complex weapon system requiring strong and effective management to overcome past problems in the weapon system development and acquisition process.

The mission of the F-14B/F-15 Joint Engine Project Office (JEPO) is stated in its charter:

The scope of the F-14B/F-15 Joint Engine Project consists of the development and production of both Navy and Air Force engine versions. This includes development through Military Qualification Tests and sustaining engineering (Component Improvement/Product Support) of both engine versions. This also includes the various engine subsystems and components, spares, repair parts, special support and test equipment, and all supporting documentation required for engine development. It includes the procurement of prototype engines for both services, the procurement of production engines as defined herein and the associated Integrated Logistic Support.

b. System Program Office (SPO)

The F-15 SPO was officially established in August 1966. Initially, the SPO had responsibility for both the F-15 (then the

F-X) and A-X Programs. In 1968, the SPO was relieved of its A-X responsibilities.

In 1969, the Deputy Secretary of Defense approved a management plan for the Joint Navy/Air Force F-14B/F-15 Engine Project. In December 1969, the F-14B/F-15 JEPO was formally chartered.

2. Delegation of Authority and Assignment of Responsibility

a. Air Force Regulation 800-2

AFR 800-2 of 16 March 1972 implemented DoD Directive 5000.1 of 13 July 1971. The AFR requires all personnel engaged in acquisition activities to comply with the provisions of the DoD Directive, which is an attachment to the AFR. AFR 800-2 also provides:

This regulation delegates maximum authority and responsibility to the implementing command and the designated Program Manager for the conduct of a program within approved performance, schedule, and funding parameters. Decentralized management principles will be used for program management and the single manager concept will be employed to the extent practicable. For any given program, appropriate review and approval actions must be reserved to higher headquarters; however, participation by all Air Force staff levels will be conducted with minimum interference to the Program Office and will be limited to that effort required to meet overall Air Force needs.

AFR 800-2 assigns the following responsibilities to an Air Force Program Manager:

- (1) Organizes, plans, directs, and controls the program, utilizing the advice and recommendations of the participating organizations.
- (2) Tailors the organization of the program office and the selection and application of management systems to the needs of the particular program within the constraints specified by the program management directive (PMD) and implementing command supplements.

(3) Makes technical and business management decisions within the approved program to accomplish program objectives. Such decisions will be directive on all participating organizations.

(4) Establishes the need, scope, costs, and schedule for all program related effort.

(5) Assesses and documents the impact of proposed changes which alter approved performance, schedule, and cost objectives.

(6) Prepares and issues a program management plan (PMP) in consonance with the PMD and implementing command supplements. The PMP is tailored to the needs of the program and will not require higher headquarters approval unless such approval is specifically required in the PMD. The PMP will be directive on participating organizations.

(7) Assures adequate communication and coordination among all participating organizations.

(8) Maintains a continuous assessment of his program's progress and performance versus requirements, threat, schedule and costs, and informs higher headquarters of recommended changes as well as potential or actual breaches of program thresholds.

b. AFSC Program Action Directive

The AFSC PAD of 9 July 1969 reassigned operational control of the F-15 SPO from the Commander, Aeronautical Systems Division (ASD), to the Commander, AFSC. The F-15 System Program Director (SPD) is the only Air Force SPD who reports directly to the Commander, AFSC. All other AFSC SPDs report to an AFSC Division or Office Commander. The PAD also established the Office of the Assistant for the F-15 within Headquarters, AFSC, and transferred F-15 Program Element Monitor (PEM) functions from Headquarters, USAF, to that office. The PAD recited the reasons for those changes:

Agreement has been reached between the Deputy Secretary of Defense, the Secretary of the Air Force, the Chief of Staff, USAF, and the Commander, AFSC, that steps will be taken to streamline management procedures within the

Air Force, particularly as they relate to the weapon systems acquisition process. In furtherance of this objective, the Assistant Vice Chief of Staff, by memorandum dated 3 July 1969, directed that the F-15 PEM and the associated functions and responsibilities be transferred from the Air Staff to HQ AFSC. The Office of the Assistant for F-15, established by this directive within HQ AFSC reporting directly to the Commander, will assume these functions and responsibilities. Also, in order to reduce the number of review echelons, this directive reassigns operational control of the F-15 SPO from the Commander, Aeronautical Systems Division to the Commander, AFSC.

The PAD also stated that AFR 375-3 gave to the SPD specific authority and responsibilities related to the management of systems within the limits of an approved program. AFR 375-3 was superseded by AFR 800-2.

c. F-14B/F-15 JEPO Charter

The 1970 F-14B/F-15 JEPO Charter provides:

The Project Manager is the senior executive directly responsible for the management of the Project and accomplishment of the objectives of this charter. He has broad directive authority within the scope of the Project over the planning, direction, control, and utilization of resources of the Joint Engine Project and over in-house and contractor Project effort. In those cases where action is required beyond the authority granted to him in this charter, he shall refer the action to the F-14 and F-15 System Managers with his recommendations, including alternatives available.

3. Layers of Authority Above Program Manager

There are two organizational layers of authority between the Secretary of the Air Force and the F-15 SPD, as depicted in Figure B-1.

LAYERS OF AUTHORITY ABOVE F-15 PROGRAM MANAGER

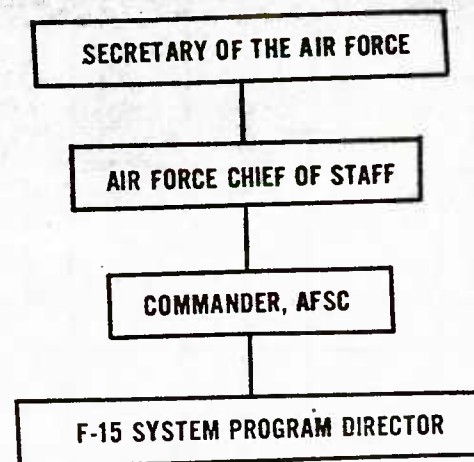


Figure B-1

4. Organization of Program Office

The organization of the F-15/JEPO Program Office is depicted in Figure B-2.

5. Staffing of Program Office

a. System Program Director and Deputy

The present F-15 SPD holds the temporary grade of Major General, USAF--having been promoted to that grade in May 1972. He was appointed as the F-15 SPD in July 1969, at which time he held the grade of Colonel. He was promoted to the temporary grade of Brigadier General effective November 1969.

The present F-15 Deputy SPD is an Air Force Colonel. In April 1969, he was assigned to the F-15 SPO as Director of Procurement and Production. He was assigned as Deputy SPD in July 1970.

b. Program Office

As of April 1972, staffing of the F-15/JEPO Program Office was as follows:

	<u>On-Board</u>	<u>Allowance</u>
Civilian	<u>143</u>	<u>150</u>
Military	<u>103</u>	<u>95</u>
<u>Totals</u>	<u>246</u>	<u>245</u>

Total on-board personnel was 246 against a total allowance of 245; collocated personnel represent 115 of the on-board total.

Civilians on-board included 1 GS-16, 8 GS-15s, 10 GS-14s, and 39 GS-13s. Military personnel assigned included the SPD and his deputy, 8 Colonels, 22 Lieutenant Colonels, and 35 Majors.

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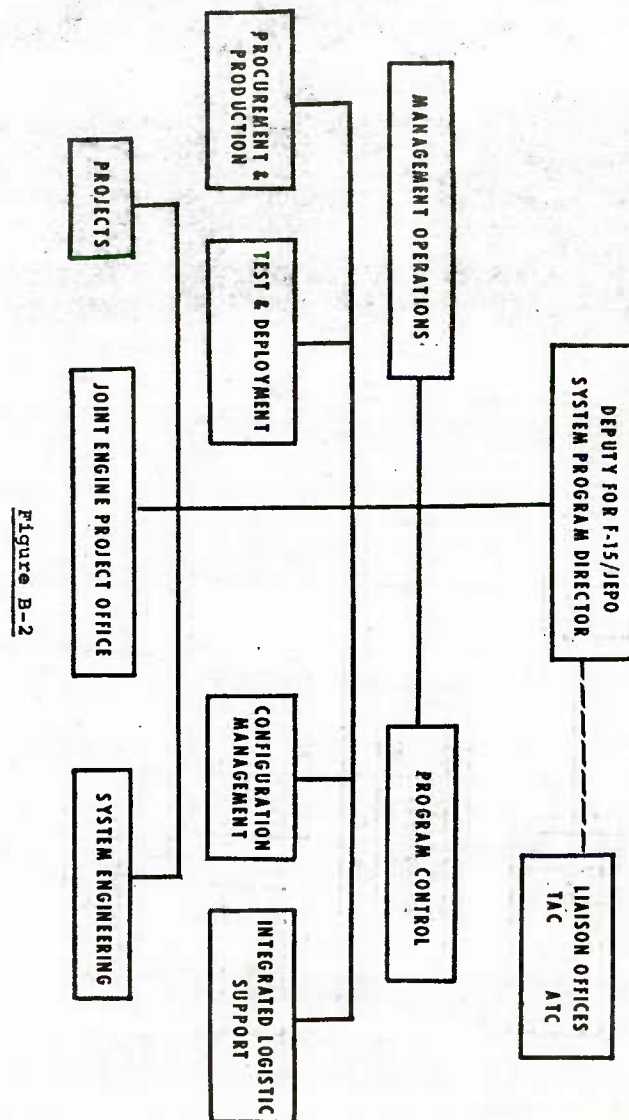


Figure B-2

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ORGANIZATION CHART F-15 SYSTEM PROGRAM OFFICE

6. Relationships with Other Organizations

a. With Superiors

As already noted, the F-15 SPD reports directly to the Commander, AFSC. The latter prepares the F-15 SPD's Officer Efficiency Reports.

The F-15 SPD's relationship with the Commander, ASD is set forth in the AFSC PAD of 9 July 1969:

Whereas the Commander, ASD will not be responsible for program direction, he will act as advisor to the Commander, AFSC as necessary, participate in the Commander, AFSC program reviews, conduct studies and analyses as requested, and provide normal ASD functional support for the F-15 SPO, such as procurement, comptroller, legal, personnel, and other staff services. The F-15 SPD will carry the additional ASD title Deputy for F-15 and will be so shown on ASD organization charts.

The F-15 SPD's philosophy is to take appropriate action and keep the Commander, AFSC, fully informed.

The SPD meets frequently with the Commander, AFSC, Air Force Chief of Staff, and Secretary of the Air Force.

The F-15 SPD uses the AFSC F-15 contact office to advantage in that most F-15 Program matters to and from the Washington, D. C. area are funneled through that office. That office also conducts briefings on F-15 Program matters at AFSC and higher organizational levels.

b. With Functional, Support Organizations

The F-15/JEPO Program Office is an example of the Air Force's "vertical" management philosophy of program management. A very considerable capability is maintained "in-house" within the SPO, and reliance upon outside functional, support organizations is much less than it otherwise would be.

For example, more than 90 engineering personnel are collocated with and assigned to the SPO. There are more than 20 Integrated Logistics Support (ILS) personnel similarly assigned. The F-15 Contracting Officer is also integral to the SPO.

The above is not to say that the F-15 SPO does not use the functional, support organizations at the Aeronautical Systems Division and elsewhere. The F-15 SPD is designated as Deputy for F-15/JEPO, ASD, and ASD continues to provide functional support to the SPO. For example, the F-15 SPO calls upon ASD functional support elements for assistance in such areas as procurement (contract writing and review), voucher payments, personnel and legal matters, plant facilities, and life support systems.

The F-15 SPO's relationships with ASD functional elements appear to be effective. The F-15 SPD goes directly to the Commander, ASD, when necessary, on F-15/JEPO Program matters. He also is represented at the ASD Commander's weekly staff meetings.

c. With Staff Specialists--the "Ilities"

The F-15 SPD told LMI that the F-15 SPO had some run-ins in the past with specialists on staffs of higher organizations in the Air Force and the Office of the Secretary of Defense (OSD) but that current relationships with such staff elements and the "ilities" (reliability, maintainability, ILS, and other specialists) were good and effective. The SPD said that he enjoys strong support from and a good professional rapport with the Office of the Director of Defense Research and Engineering (ODDR&E) and the Office of the Assistant Secretary of Defense (Installations and Logistics) (OASD(I&L)).

The SPD stated that he gets responsive support from Air Force staff elements and specialists. He keeps appropriate staff elements informed to insure their support. The SPD meets with the Secretary and Chief of Staff of the Air Force on a quarterly basis with an option to meet monthly. He finds that those meetings motivate staff elements to do their jobs on time.

7. Planning, Directing, and Controlling

a. Formal Plans

The F-15 SPO prepared or participated in the development and processing of such documents as the:

- Requirements Action Directive -- SPO assisted the Tactical Air Command
- Technical Development Plan -- SPO prepared
- System Package Plan -- SPO prepared
- Development Concept Paper -- SPO participated
- Advance Procurement Plan -- SPO prepared
- Program Management Directive -- SPO participated

b. Control of Funds

The F-15 SPO prepares budget requirements and controls program funds. It also controls travel and overtime funds for SPO personnel.

c. Reporting

The principal reports are the Selected Acquisition Report (SAR) and the Program Assessment Review (PAR).

Reporting requirements are not burdensome.

d. Changes

Within the thresholds of the Development Concept Paper, the F-15 SPD has almost complete authority to make design and engineering changes.

e. Contracting

The SPO prepared the Request for Proposals, with assistance from ASD. The F-15 SPD was Chairman of the Source Selection Evaluation Board.

A-X PROGRAM

1. Background

a. Purpose

The purpose of the A-X Program is to conduct a competitive prototype development leading to the acquisition of a low cost, simple aircraft to meet Air Force requirements for close air support in the post-1975 time period. The user will be the Tactical Air Command (TAC).

b. System Program Office (SPO)

The A-X SPO was formally established in 1970. Prior to that time, there was a SPO cadre (two or three people) under the Deputy for Development Planning, Aeronautical Systems Division (ASD). From 1966 to 1968, the A-X and the F-15 (then the F-X) Programs shared a SPO.

2. Delegation of Authority and Assignment of Responsibility

a. Air Force Regulation 800-2

(See Appendix B, pages 2 and 3.)

b. Air Force System Management Directive (SMD)

An Air Force SMD of 6 May 1971 provides:

Management responsibility and authority, within the limits of applicable regulations, is vested in the System Program Director to meet schedule, cost, and performance objectives, as well as highlighting inconsistent scheduling problems for the A-X sub-systems.

3. Layers of Authority Above Program Manager

There are four organizational layers of authority between the Secretary of the Air Force and the A-X System Program Director (SPD), as depicted in Figure C-1.

4. Organization of Program Office

The organization of the A-X Program Office is depicted in Figure C-2.

The organization of the Office of the Deputy for Systems, ASD, is depicted in Figure C-3.

An unofficial, simplified version of the organization of the Aeronautical Systems Division (ASD) is depicted in Figure C-4.

ORGANIZATION CHART **A-X SYSTEM PROGRAM OFFICE**

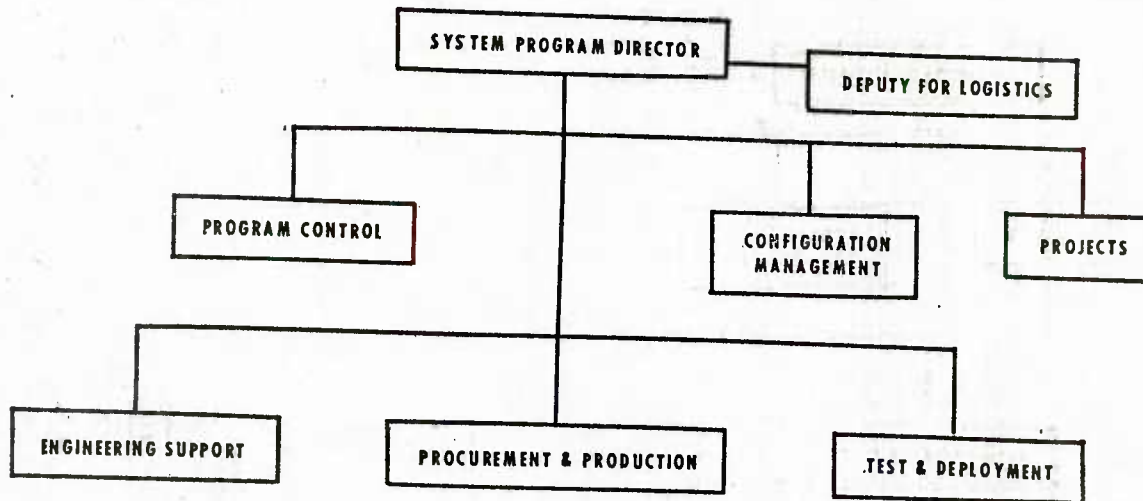


Figure C-2

Appendix C
 Page 4
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LAYERS OF AUTHORITY ABOVE **A-X PROGRAM MANAGER**

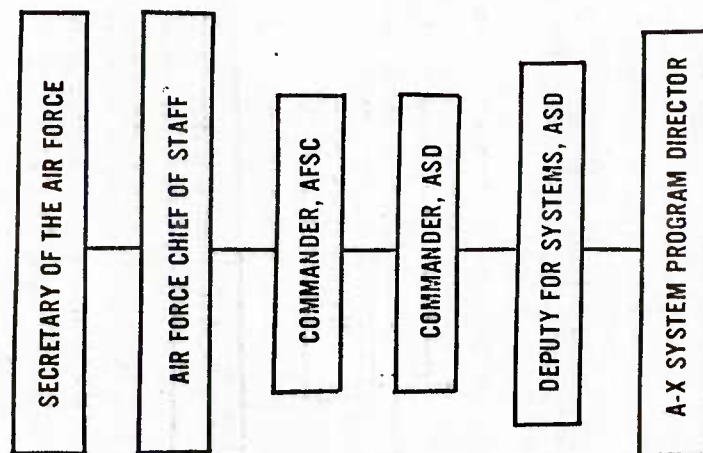


Figure C-1

Appendix C
 Page 3

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ORGANIZATION CHART **AERONAUTICAL SYSTEMS DIVISION**

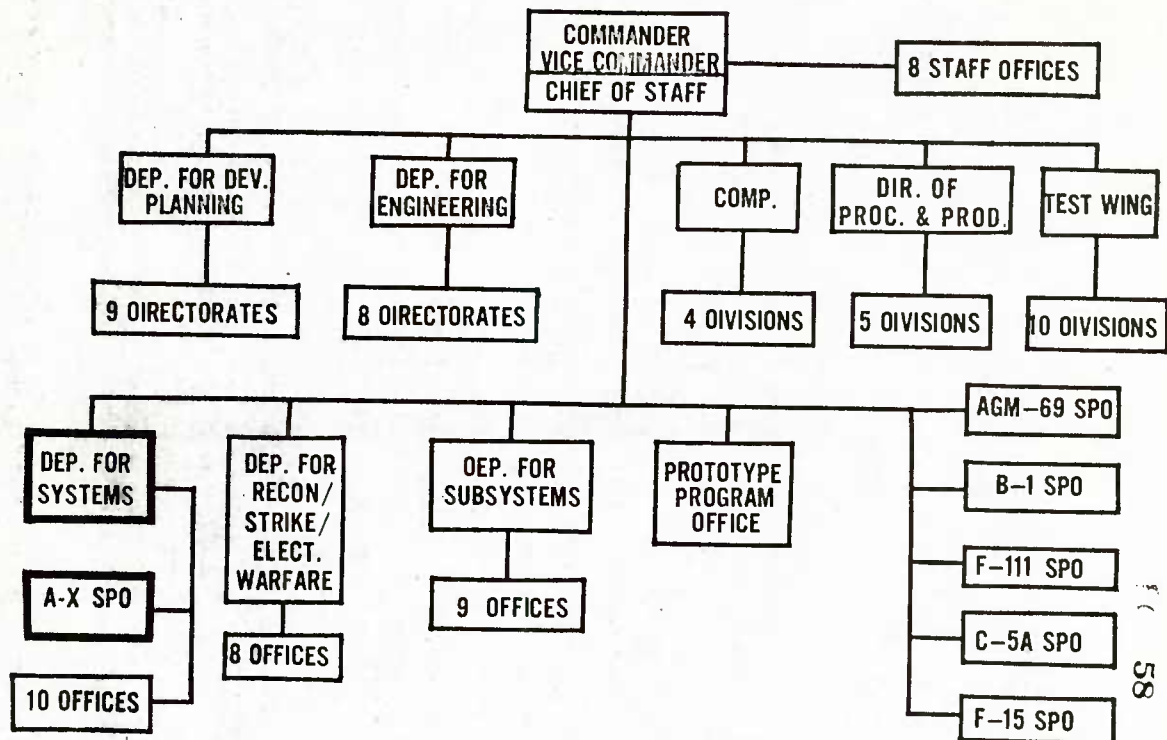


Figure C-4

Appendix C
Page 6

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ORGANIZATION CHART **DEPUTY FOR SYSTEMS, ASD**

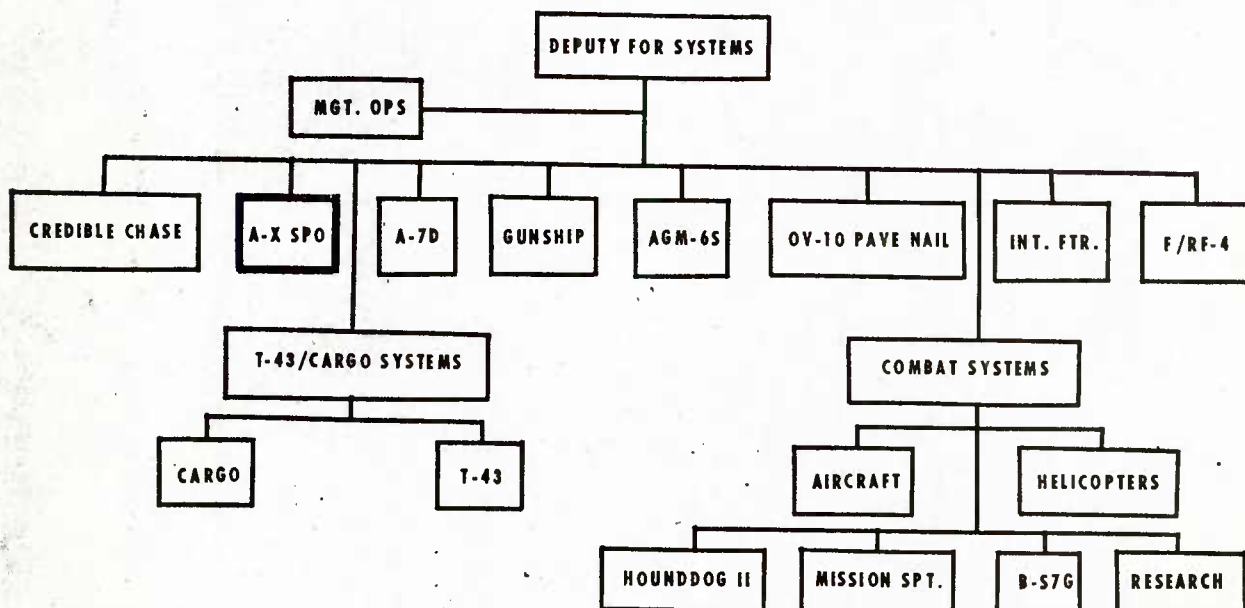


Figure C-3

Appendix C
Page 5

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5. Staffing of Program Office

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a. System Program Director and Deputy

The present A-X SPD is an Air Force Colonel--promoted to that grade effective 12 March 1967. He was appointed as the A-X SPD in May 1970.

The present A-X Deputy SPD is also an Air Force Colonel--promoted to that grade effective 27 December 1970. He was assigned as Deputy SPD in July 1971. Prior to that time, the Assistant SPD (GS-15) acted as Deputy; he was assigned to the SPO in March 1970.

b. Program Office

As of May 1972, staffing of the A-X Program Office was as follows:

	<u>On-Board</u>	<u>Allowance</u>
<u>SPO Proper</u>		
Civilian	<u>17</u>	<u>27</u>
Military	<u>17</u>	<u>32</u>
<u>Totals</u>	<u>34</u>	<u>59</u>
<u>Collocated</u>		
Civilian	<u>33</u>	<u>33</u>
Military	<u>8</u>	<u>8</u>
<u>Totals</u>	<u>41</u>	<u>41</u>

Collocated personnel were as follows:

Engineering (ASD)	<u>30</u>
Comptroller (ASD)	<u>1</u>
AFLC	<u>5</u>
TAC	<u>1</u>
AFCMD	<u>4</u>
<u>Total</u>	<u>41</u>

Total on-board personnel (SPO proper plus collocated) was 75.

Within the SPO proper, civilians on-board included 2 GS-13s; assigned military personnel included the SPD and his deputy, 5 Lieutenant Colonels, and 3 Majors.

6. Relationships with Other Organizations

a. With Superiors

As already noted, the A-X SPD reports directly to the Deputy for Systems, ASD (an Air Force Colonel), who prepares the SPD's Officer Efficiency Reports (OERs). The Deputy for Systems reports directly to the Commander, ASD. The Commander, ASD, endorses the A-X SPD's OERs.

The A-X SPD made the following observations to LMI:

- The layers of authority above the A-X SPO have created no unmanageable problems; this is not to say that there couldn't be problems. Personal relationships with the Deputy for Systems are excellent. The SPD often meets with the ASD Commander. The layering does mean that presentations must be given one more time--but that is a minor problem.

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- The rank of Colonel is sufficient for the A-X Program Manager at this stage of the program. The A-X Program has been approved only through the Validation Phase--with two contractors funded under firm fixed-price contracts to design, develop, and fabricate two prototype aircraft each. If the program is given a production "go-ahead," it may be that the A-X SPO will become a "Super-SPO" headed up by a General Officer. In the prototype stage, however, being a Colonel works no hardship.
- The A-X Program is a lower order of technology program than the F-15 Program and does not need the same kind of functional support or as big an organization as the F-15. The flow of data between A-X contractors and the SPO has been practically eliminated; the SPO maintains desired visibility through close, personal contacts with the contractors' management and engineering personnel.
- A large part of the job of the SPD is to provide an interface between parallel and higher organizations; the SPD devotes considerable time to the external facets of the program--high level briefings, Congressional testimony, and special exercises. It is important to keep higher authorities informed--to retain their support for the program and to insure that they do not create problems which will require much more effort to cure later. The Deputy SPD concentrates more on SPO-contractor relationships, contract performance, and internal SPO operations.

The A-X Program Element Monitor (PEM) at Headquarters, USAF, provides a focal point for overall planning of Headquarters' staff actions on the A-X Program. The A-X Office of Primary Responsibility (OPR) at AFSC coordinates A-X Program matters at AFSC and briefs AFSC and higher authority.

b. With Functional, Support Organizations

An Engineering Support Group of 30 personnel (24 civilian and 6 military) is collocated with the A-X SPO and is supported by specialists in its home directorate in ASD. The SPD endorses the OERs of military personnel assigned to the Engineering Support Group.

The A-X SPO Deputy for Logistics is an Air Force Colonel from AFLC. His group carries on all logistics interface activities for the SPO and with higher authority. The SPD prepares an evaluation report on the Deputy for Logistics.

A full-time Financial Manager is assigned to the SPO and spends 100% of his time on the A-X Program. One TAC representative is collocated with the SPO. A Comptroller representative is also collocated with the SPO.

The Contracting Officer is integral to the SPO. Four personnel from the Air Force Contract Management Division (AFCMD) are on extended temporary duty from AFCMD to the A-X SPO. Those personnel (Quality Assurance, Contract Administration, Engineering, and Production Engineering) are participating in program evaluation and Source Selection activities and will be assigned key positions in the Contract Administration Services organization resident at the winning contractor's plant after award of the Full-Scale Development contract.

The A-X SPO also relies upon the Management Operations Office of the Office of the Deputy for Systems and various Directorates of ASD (such as Procurement and Production) for functional support. The SPO has received good support from those functional elements. There are no formal memoranda of understanding with such organizational elements or with AFLC.

The SPD does not attend the weekly staff meetings of the Commander, ASD. The Deputy for Systems attends such meetings and carries information back to the SPOs assigned to his office.

c. With Staff Specialists--the "Ilities"

To date, A-X SPO personnel have had few "ility" contacts at high levels in the Air Force or Office of the Secretary of Defense (OSD), except in the areas of Survivability/Vulnerability and Life Cycle Costing. Survivability/Vulnerability considerations are critical to the A-X Program. Emphasis is also being placed upon Life Cycle Costing (LCC), and the SPO is encouraging the contractors to include LCC considerations in their aircraft design. In those two areas, specialists have been helpful to the SPO.

SPO personnel said that most staff specialists have adopted a "hands-off" attitude, recognizing that the competitive prototype aspects of the A-X Program make it different from other programs.

SPO personnel also stated that they expect more involvement with staff specialists at higher levels as the program moves into Full-Scale Development and Production.

To date, recommendations to the SPO from staff specialists have been "suggestive" in nature.

7. Planning, Directing, and Controlling

a. Formal Plans

The Requirements Action Directive (RAD) for the A-X was prepared by Air Force Headquarters prior to the establishment of the SPO. The prototype aircraft are being designed to meet

established performance goals; the need for trade-offs and cost considerations is being emphasized, however, and the SPO might be a party to the relaxation of performance goals to effect significant economic benefits.

The A-X SPO prepared or participated in the development and processing of such documents as the:

- Technical Development Plan--SPO cadre prepared
- Development Concept Paper--Prepared at Air Staff and OSD level with informal inputs from the SPO
- Advance Procurement Plan--SPO prepared

b. Control of Funds

The A-X SPO prepares budget requirements and controls program funds. It also controls travel and overtime funds for SPO personnel.

c. Reporting

The principal report is the Selected Acquisition Report (SAR). The major briefing requirement is the Program Assessment Review (PAR).

The SPD stated that he makes the quarterly PAR presentation four or five times. The presentation normally changes a bit each time to accommodate suggested improvements to briefing format or to address subjects that are of interest to reviewing officials, e.g., reliability/maintainability.

The SPD stated that he had observed a relaxation of reporting requirements over the last two years.

d. Changes

In December 1970, two contractors were selected to develop prototype aircraft for a competitive "fly-off." The

SPO played an important role in the decision to go the competitive prototype route on the A-X. Minimal design restraints have been placed upon the two contractors. Consequently, no significant engineering or design changes have been proposed to date.

e. Contracting

The A-X SPO prepared the Request for Proposals, with assistance from ASD. The SPD was Chairman of the Source Selection Evaluation Board.

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SAFEGUARD PROGRAM

1. Background

a. Purpose

The purpose of the SAFEGUARD Program is set forth in a Department of the Army System Charter dated 7 May 1971:

The Department of Defense has directed the Army to develop and deploy the SAFEGUARD Ballistic Missile Defense (BMD) System and to plan and carry out a Hardsite (HSD) prototype demonstration program.

The mission of the SAFEGUARD System Manager (SAFSM) is also set forth in the charter:

The SAFEGUARD System Manager will develop and assure timely, effective deployment of the SAFEGUARD Ballistic Missile Defense System and will plan and carry out a Hardsite prototype demonstration program. The SAFEGUARD System Manager will provide a single point of contact within the Department of the Army for the coordination and direction of all activities pertaining to the SAFEGUARD BMD System and the HSD demonstration program.

The initial SAFEGUARD System Charter was issued 20 June 1969 and superseded the SENTINEL System Charter, which had been approved by the Secretary of the Army (SA) on 3 November 1967. The SAFEGUARD Program reflects the President's decision to reorient the SENTINEL Deployment to a modified phased deployment oriented to the defense of the nation's land-based deterrent capability. During the 1964-67 time frame, the Army's BMD Program carried the NIKE-X designation.

The name Hardsite was changed to Site Defense of MINUTEMAN on 28 February 1972 and subsequently changed to Site Defense on 13 April 1972.

b. SAFEGUARD System Organization

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On 15 November 1967, Department of the Army General Orders 48 established the SENTINEL System Organization, which was subsequently redesignated the SAFEGUARD System Organization on 25 March 1969 by Department of the Army General Orders 18. The SAFEGUARD System Organization under the command of the SAFSM consists of the following:

- The U. S. Army SAFEGUARD System Office (SAFSO)

The SAFSO constitutes the Washington element for management of the SAFEGUARD program, established as an element of the Office of the Chief of Staff of the Army to assist the SAFEGUARD System Manager in the exercise of his responsibilities. The SAFSO organization is depicted in Figure D-2.

- The U. S. Army SAFEGUARD System Command (USASAFSCOM)

The USASAFSCOM is the field command established for accomplishment of the development, acquisition, and installation of the SAFEGUARD BMD System within the guidance and direction of the System Manager. Figure D-3 is a chart of the USASAFSCOM organization.

- The U. S. Army SAFEGUARD System Evaluation Agency (SAFSEA)

The SAFSEA provides a single organization for performing evaluation of the SAFEGUARD BMD System, independent of the SAFEGUARD System Command, its contractor organizations, and participating organizations. The SAFSEA has the responsibility for performing or participating in testing necessary to support an independent evaluation program responsive to operational requirements. The SAFSEA organization is depicted in Figure D-4.

2. Delegation of Authority and Assignment of Responsibility

The SAFEGUARD System Charter states:

a. The SAFEGUARD System Manager will exercise Department of the Army executive authority over the approved SAFEGUARD Program and the resources made available for its accomplishment.

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b. The SAFEGUARD System Manager is assigned to the Office of the Chief of Staff, as the principal assistant and staff advisor to the Chief of Staff and the Secretary of the Army for all matters pertaining to the SAFEGUARD program. He is authorized to take any action with respect to the SAFEGUARD System Organization which regulations and directives vest in all Heads of Army Staff Agencies or Major Field Commanders.

c. The SAFEGUARD System Manager, within instructions issued by the Chief of Staff of the Army, will exercise staff supervision over all Army Staff Agencies and participating organizations of the Department of the Army for planning, direction and control of the SAFEGUARD program.

d. He will assure preparation, coordination and publication of appropriate directives pertaining to those tasks to be performed by participating organizations of the Department of the Army, and is authorized to negotiate appropriate agreements with participating organizations outside of the Department of the Army.

e. He is responsible for preparation, coordination as appropriate, approval where required by appropriate authorities, and maintenance of the SAFEGUARD System Master Plan.

f. He is responsible for preparing the budget documentation to support those SAFEGUARD functions which he commands, and reviewing the budget documentation prepared by other commands to support SAFEGUARD functions performed by those commands; he will advise the Appropriation and Budget Program Directors on SAFEGUARD requirements to be included in fund allocations to appropriate Army Commands and in Army budget submissions to the Office of the Secretary of Defense.

g. He is responsible for achieving the technical performance objectives for SAFEGUARD on schedule and at the lowest possible cost.

3. Layers of Authority Above Program Manager

There is one layer of authority between the Secretary of the Army and the SAFSM, as depicted in Figure D-1. Since the SAFSM and the SAFSO are assigned to the Office of the Chief of Staff, the Chief of Staff is the only level of authority between the SAFSM and the Secretary of the Army.

LAYERS OF AUTHORITY ABOVE
SAFEGUARD PROGRAM MANAGER

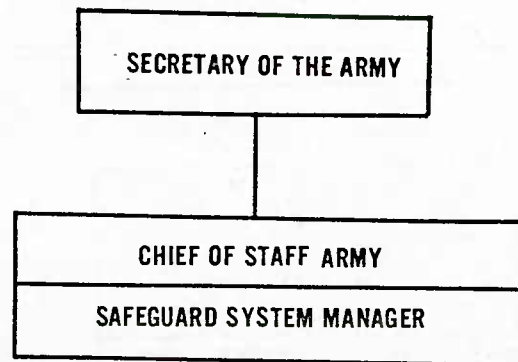


Figure D-1

UNITED STATES ARMY SAFEGUARD SYSTEM OFFICE

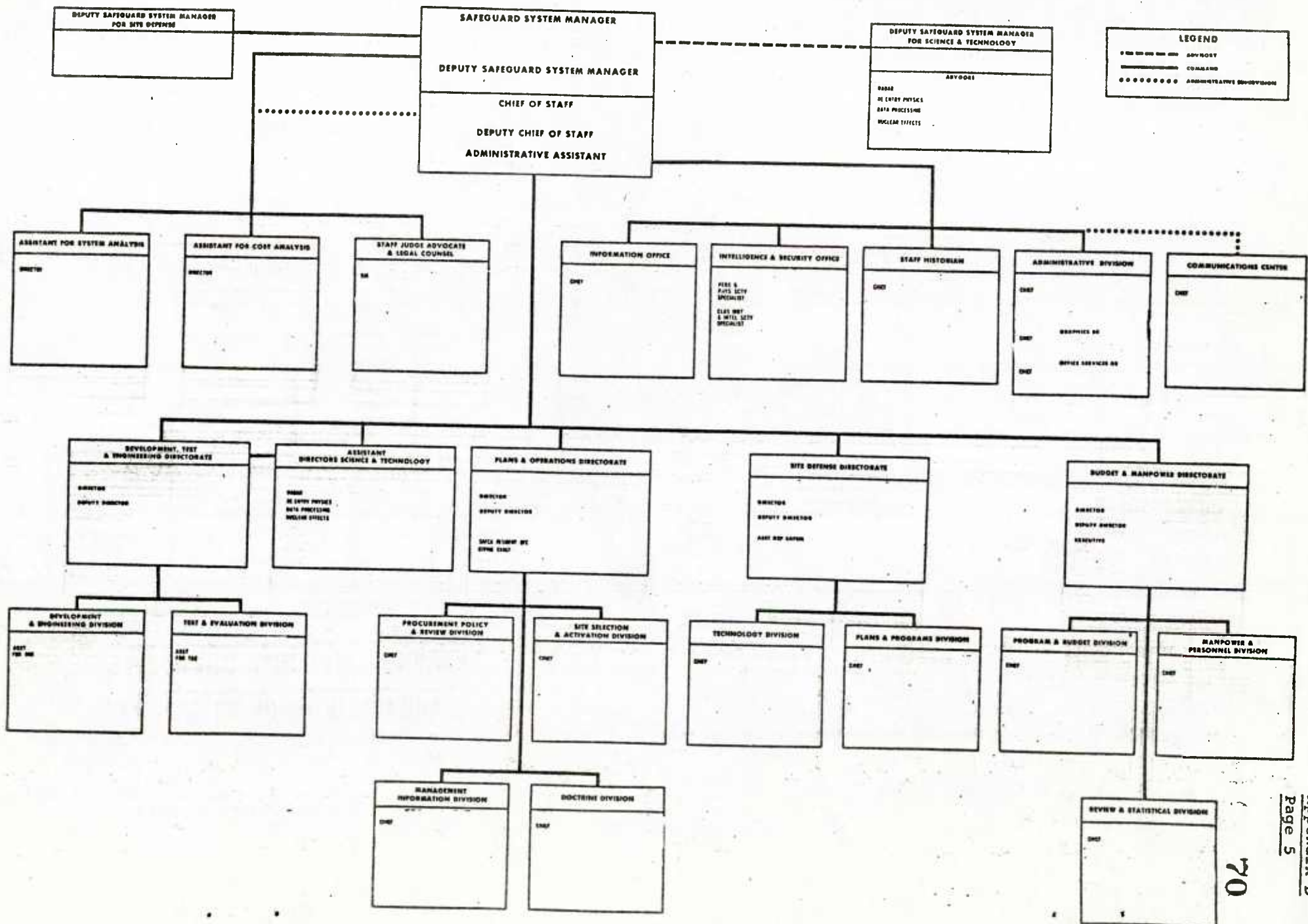


Figure D-2

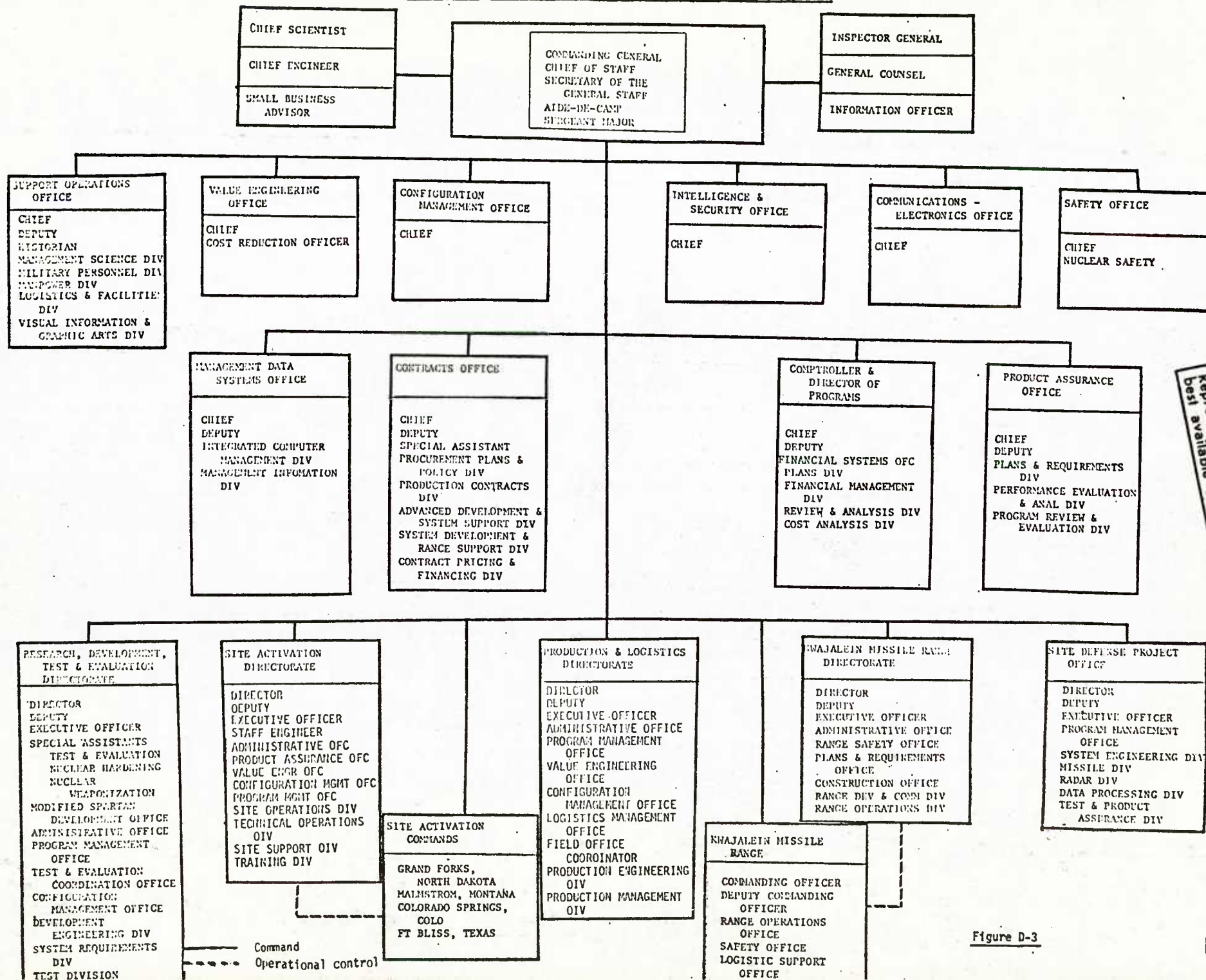

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Figure D-3

US ARMY SAFEGUARD SYSTEM EVALUATION AGENCY

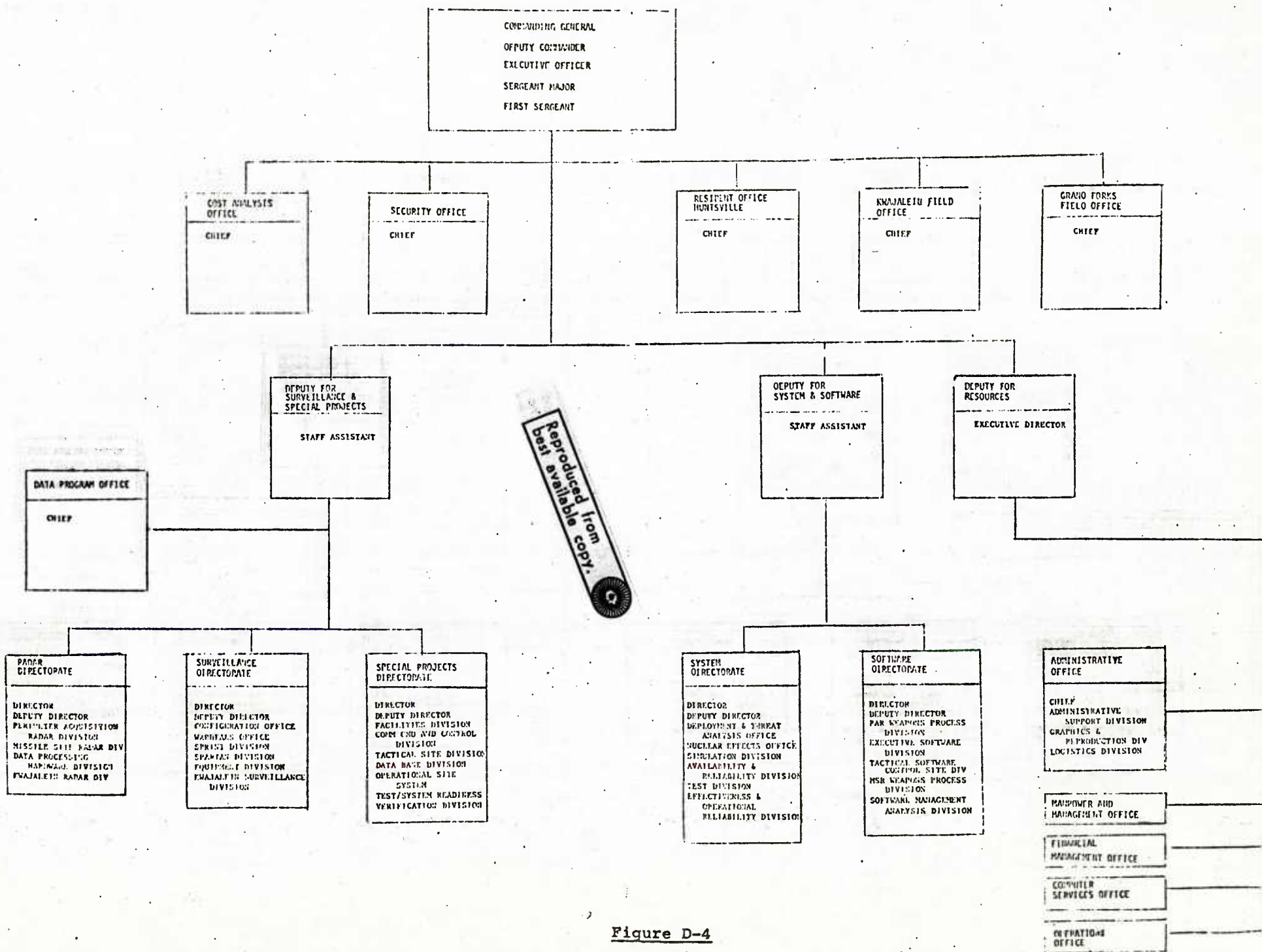


Figure D-4

4. Staffing of the System Organization

a. System Manager and Deputy

The present SAFSM is an Army Lieutenant General--having been promoted to that grade on 1 April 1971, when he assumed duty as the System Manager.

The present Deputy System Manager is an Army Major General--having been promoted to that grade on 1 June, 1970. In December 1966, he was assigned duty as Deputy NIKE-X System Manager (Plans). On 28 February 1967, he was promoted to Brig. General, and in November 1967, he was appointed Deputy SENTINEL (now SAFEGUARD) System Manager.

b. SAFEGUARD System Office (SAFSO)

As of April 1972, staffing of the SAFSO was as follows:

	<u>On-Board</u>	<u>Authorized</u>
Civilian	<u>97</u>	<u>107</u>
Military	<u>59</u>	<u>61</u>
<u>Totals</u>	<u>156</u>	<u>168</u>

Civilians on-board included 8 Public Law 313s, 6 GS-15s, 17 GS-14s, and 8 GS-13s. Assigned military personnel included the SAFSM and his Deputy, 11 Colonels, 26 Lieutenant Colonels, and 9 Majors.

c. U. S. Army SAFEGUARD System Command (USASAFSCOM)

As of April 1972, staffing of the USASAFSCOM was as follows:

	<u>On-Board</u>	<u>Authorized</u>
Civilian	<u>1130</u>	<u>1181</u>
Military	<u>123</u>	<u>140</u>
<u>Totals</u>	<u>1253</u>	<u>1321</u>

The Commanding General, USASAFSCOM, is an Army Major General. Two Brigadier Generals are also assigned to USASAFSCOM.

d. U. S. Army SAFEGUARD System Evaluation Agency (SAFSEA).

As of April 1972, staffing of the SAFSEA was as follows:

	<u>On-Board</u>	<u>Authorized</u>
Civilian	<u>312</u>	<u>350</u>
Military	<u>215</u>	<u>263</u>
<u>Totals</u>	<u>527</u>	<u>613</u>

5. Relationships With Other Organizations

a. With Superiors

As already noted, the SAFSM reports directly to the Army Chief of Staff and is a member of the Office of the Chief of Staff. That organizational arrangement is unique in the Department of the Army. All other Army Program Managers report to the Commanding General, Army Materiel Command (AMC) or to one of his major Sub-Commanders.

With knowledge of the Chief of Staff, the SAFSM keeps the Secretary of the Army and his civilian executive assistants apprised of plans and progress. The SAFSM has direct access to the Assistant Secretaries of the Army for Research and Development, Installation and Logistics, and Financial Management.

The SAFSM is also designated as the Army point of contact for the SAFEGUARD Program with the Office of the Secretary of Defense (OSD), specifically with the Offices of the Director of Defense Research and Engineering and the Assistant Secretary of Defense (Systems Analysis), and with other Government Agencies, such as the Atomic Energy Commission and the other Military Departments.

SAFEGUARD Program officials' observations to LMI

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included:

- The SAFEGUARD Program represents the development and deployment of a defensive weapon system of the highest national priority. The unique SAFEGUARD System Organization was established to provide for exceptional management of that program. The organizational location of the SAFSM and the SAFSO promotes speedy resolution of complex problems and expedites decision-making. Issues which could otherwise require months of deliberation and staffing are often resolved in a matter of days.
- The military rank of the SAFSM significantly enhances his stature with his superiors and his ability to obtain responsive support from functional organizations.
- Our charter gives us reasonably clear-cut control of all SAFEGUARD Program resources. That control also helps us obtain responsive action from supporting organizations.
- We have very capable people in the SAFEGUARD Program. The SAFSM has concurrence authority in the selection of his Deputy and other key military and civilian supervisory and technical personnel. We enjoy a good grade structure and attract competent civilian personnel.
- The SAFEGUARD System Organization is expensive in terms of personnel. This expense, however, is part of the cost of development and deployment of a weapon system with the magnitude and complexity of the SAFEGUARD program. Were management and control of the system dispersed throughout the organizational structure of the Army in the same manner as for other weapon systems, the personnel cost directly identifiable with SAFEGUARD would probably be smaller than that of the dedicated SAFEGUARD System Organization.

b. With Staff Agencies

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Each Army Staff Agency has established an Executive Agent responsible for SAFEGUARD actions and as point of contact for external relations.

c. With Functional, Support Organizations

The SAFEGUARD System Charter provides that the SAFSM will utilize the functional Major Field Commands of the Army to the maximum extent compatible with System requirements and that the SAFSM shall determine the tasks to be accomplished by them.

The SAFSM has been delegated authority to authenticate correspondence "BY DIRECTION OF THE CHIEF OF STAFF" for SAFEGUARD System matters. Several formal task assignments have been issued by the SAFSM to Major Field Commands of the Army.

The SAFSM has also negotiated formal memoranda of agreement with Major Army Field Commanders covering specific areas of joint responsibilities. Three of those memoranda are especially significant.

Under one memorandum of agreement, the Commanding General (CG), AMC, and the SAFSM delineate the relationships between the U. S. Army SAFEGUARD Logistics Command (SAFLOG), USASAFSCOM, and the SAFSM. The CG, AMC has established SAFLOG to provide tactical item logistics support to tactical SAFEGUARD sites and to develop the logistics system for the support of the deployed SAFEGUARD System. SAFLOG presently has some 500 personnel on-board, collocated with USASAFSCOM at Huntsville, Alabama. The CO, SAFLOG remains under the command of the CG, AMC and abides by AMC policies and procedures. Under the memorandum of agreement, however, the CO, SAFLOG is under the operational control of the SAFSM, who has authority to issue

such instructions as are necessary to accomplish the timely development of the SAFEGUARD logistics system. The CG, USASAFSCOM, assists the CO, SAFLOG in the development and readying of the logistics system. The two Commands coordinate the accomplishment of their respective missions, but each is authorized direct access to the SAFSM on matters which cannot be resolved at their level.

Under a second memorandum of agreement, a similar arrangement exists with the SAFSM and the Army Chief of Engineers. The Chief of Engineers has established the U. S. Army Engineer Division, Huntsville (USAEDH), collocated with USASAFSCOM, to design and construct developmental, training, support, and tactical facilities for the SAFEGUARD Program. Some 400 USAEDH personnel are collocated with USASAFSCOM at Huntsville. The agreement places the USAEDH under the operational control of the SAFSM. The CG, USASAFSCOM and the Division Engineer, USAEDH are expected to resolve mutual problems and potential conflicts. Both are authorized direct access to the SAFSM on matters which cannot be resolved at their level. The USAEDH also remains responsible directly to the Chief of Engineers for efficient accomplishment of tasks assigned by the SAFSM.

A third memorandum of agreement exists between the SAFSM and the U. S. Army Strategic Communications Command (USASTRATCOM) to provide communication subsystems for the SAFEGUARD Program. The USASTRATCOM has established the USASTRATCOM SAFEGUARD Communications Agency (SAFCA) to manage the SAFEGUARD communications program and to be responsive to the SAFSM for the establishment, operation, maintenance, and support of communications subsystems. The CG, SAFCA is under the operational control of the SAFSM; however, he remains under the command of the CG, USASTRATCOM and abides by USASTRATCOM policies, procedures, and regulations.

Also, there are some 150 personnel of the Huntsville Office of the Advanced Ballistic Missile Defense Agency, the U. S. Army Air Defense Command (ARADCOM) Field Office, and Field Offices of the SAFEGUARD Communications Agency (SAFCA) and SAFEGUARD System Evaluation Agency (SAFSEA) collocated with USASAFSCOM at Huntsville.

The rating and indorsing officials on Officer Efficiency Reports of key personnel are:

Officer	Rater	Indorser
SAFSM	Vice Chief of Staff, Army*	Chief of Staff, Army*
DEP SAFSM	SAFSM	Vice Chief of Staff, Army
CG, USASAFSCOM	SAFSM	Vice Chief of Staff, Army
Division Engineer, USAEDH	Chief of Engineers	SAFSM
CG, SAFCA	CG, U. S. Army Strategic Communications Command	SAFSM
CO, SAFSEA	Deputy SAFSM	SAFSM
CO, SAFLOG	Deputy CG, Logistics Support, AMC	SAFSM

Senior officers of SAFLOG and USAEDH stated that there has been little difficulty in walking the line between their command channel (AMC--Chief of Engineers) and their "operational control" by SAFSM. SAFLOG and USAEDH officials emphasized that their collocation with USASAFSCOM was a tremendous advantage. Communications among USASAFSCOM, SAFLOG, and USAEDH are very effective and facilitate the resolution of problems at Huntsville. SAFLOG and USAEDH Commanders do not hesitate to go directly to the SAFSM or his Deputy, however, if necessary.

SAFSO personnel stated that the SAFEGUARD Program receives responsive, effective support from functional and other participating organizations.

*As the principal assistant for the SAFEGUARD Program reporting directly to the Chief of Staff, Army, efficiency reports are rendered on the SAFSM on a "when required" basis.

d. With Staff Specialists--the "Ilities"

The SAFEGUARD System Organization relies upon Army staff specialists in certain areas (contract pricing, for example). USASAFSCOM personnel stated that "we know the Army staff elements are there and are responsive to them." USASAFSCOM has found it more difficult to introduce a requirement such as Cost/Schedule Control System Criteria (C/SCSC) upon an old contractor (SAFEGUARD development and deployment) than upon a new contractor (Site Defense Program).

SAFEGUARD Program personnel have had few problems with the "ility" disciplines. Considerable Program emphasis has been placed upon configuration control. Generally, OSD specialists have been helpful to the SAFEGUARD System Organization.

6. Planning, Directing, and Controlling

a. Formal Plans

The SAFEGUARD System Organization, acting for the Department of the Army, prepared or participated in the development and processing of such documents as the:

- Qualitative Materiel Requirement--Initially developed by the Combat Developments Command, with inputs from the NIKE-X Project Office.
- System Development Plan--USASAFSCOM prepared, SAFSO reviewed, and SAFSM approved.
- SAFEGUARD System Master Plan--SAFEGUARD Community prepared, SAFSO reviewed in coordination with other Army Staff elements, and SAFSM approved.
- Development Concept Paper (DCP)--No formal SAFEGUARD DCP exists; the program has operated under a Presidentially Directed Annual Review.

b. Control of Funds

The SAFSM exercises control, for the Department of the Army, over the allocation and utilization of all resources approved in the Five Year Defense Program and approved by the Secretary of the Army for the execution of the program. The SAFSM advises Army Appropriation and Budget Program Directors on SAFEGUARD requirements to be included in fund allocations to appropriate Army Commands and in Army budget submissions to OSD. The SAFSM has generally been invited to participate in SAFEGUARD Program advocacy at Congressional hearings. The SAFSM has complete control of the variety of funds ear-marked for the SAFEGUARD Program, except for Public Affairs and Military Family Housing funds.

The SAFSO prepares Program Change Requests, with inputs from USASAFSCOM and other elements of the SAFEGUARD organization.

c. Reporting

The Selected Acquisition Report (SAR) is the most important recurring report submitted by the SAFSO. It is prepared by USASAFSCOM on a quarterly basis, reviewed by the SAFSO, approved by the SAFSM, transmitted to the Comptroller of the Army, and forwarded to the Assistant Secretary of Defense (Comptroller) over the signature of the Assistant Secretary of the Army (Financial Management). The data therein find their way to the General Accounting Office and the Congress. SAR reporting has presented no difficult problems.

The SAFSM meets with the Army Chief of Staff, the Secretary of the Army, and OSD officials on an "as required" basis on SAFEGUARD Program matters. He regularly attends a weekly General Staff Council meeting held by the Vice Chief of Staff.

The SAFSM also personally briefs the Secretary of the Army each month on progress and problems on the SAFEGUARD and Site Defense Programs. Interested Army Assistant Secretaries attend those briefings. There may be a prior presentation of those briefings to the Chief of Staff or Vice Chief of Staff. The CG, USASAFSCOM, as required, briefs the Assistant Secretary of the Army (I&L), preceded by a presentation at the SAFSO.

There is a minimum of nit-picking and rehearsals incident to SAFEGUARD briefings. SAFEGUARD Program personnel do not find briefing requirements burdensome, and, in fact, often volunteer briefings.

d. Changes

The SAFSM, acting for the Department of the Army, has authority to approve proposed engineering and design changes to the SAFEGUARD System. The SAFEGUARD Configuration Control Board (SCCB) is located at USASAFSCOM and has representation from SAFEGUARD agencies, ARADCOM, and contractors. SAFEGUARD SCCB recommendations, above approval thresholds established by the SAFSM, are forwarded to the SAFSM for approval. Nonconcurrents are also presented to the SAFSM for resolution.

There has been excellent cooperation among USASAFSCOM, USAEDH, SAFLOG, other interested Commands, and contractors on

configuration management matters. USASAFSCOM personnel stressed that the collocation of USASAFSCOM, SAFLOG, and USAEDH promotes such cooperation.

To date, engineering and design changes have created no serious funding problems.

e. Contracting

The SAFEGUARD System Organization has been designated a Procuring Activity of the Army in the Armed Services Procurement Regulation (ASPR). Within the meaning of the ASPR and Army Procurement Procedure (APP), the SAFSM is designated the Head of a Procuring Activity (HPA), the CG, USASAFSCOM is the Deputy to the SAFSM for procurement matters, and the Chief, Contracts Office, USASAFSCOM, is the Principal Assistant for Procurement to the HPA. The SAFSM approves all awards over \$100 million. The CG, USASAFSCOM is delegated authority to approve awards not in excess of \$100 million, with the power of redelegation restricted to the minimum required for accomplishment of the SAFEGUARD Program. The dollar authority for contract execution granted to contracting officers is determined by the CG, USASAFSCOM.

Requests for special procurement authority required by the SAFSM are submitted to the Assistant Secretary of the Army (Installations & Logistics).

The USASAFSCOM acts as the single contracting office for the SAFEGUARD System and maintains an almost complete in-house contracting capability.

The SAFSO Procurement Policy and Review Division advised LMI that there is no excessive layering with respect

to SAFEGUARD Program procurement matters and that the SAFEGUARD System Organization has received outstanding support from the Offices of the Assistant Secretaries of the Army for Installations and Logistics and Research and Development. The organizational location of the SAFSM and SAFSO was cited as an advantage in this area.

Requests for Proposals are prepared by the USASAFSCOM. Review by the SAFSO and by elements of the Army Secretariat is rare and only with regard to limited major procurements of particular significance.

On the Site Defense source selection, the Chief Engineer, USASAFSCOM, chaired the Source Selection Evaluation Board, the CG, USASAFSCOM, chaired the Source Selection Advisory Council, and the Secretary of the Army was the Source Selection Authority.

SCOUT PROGRAM

1. Background

a. Purpose

The purpose of the Armored Reconnaissance Scout Vehicle Program is the development, production, and support of "a small, lightweight, lightly armored, highly mobile, agile, quietly operating vehicle with an inherent swimming capability. It will incorporate superior/optimum cross-country mobility and agility, day and night vision, crew protection, and amphibious operation characteristics. It is to be air transportable and is defined in terms of performance characteristics only. The Scout is designed to increase significantly the capability of U. S. forces to gain information of the enemy and terrain, and to provide security from surprise for the ground combat forces."*

b. Project Management Office

Army Regulation 70-17, "System/Project Management," describes an Army Project Management Office (PMO):

The organization comprised of personnel assigned full time to a project manager. The PMO may be augmented with additional personnel from participating organizations when provided in the charter or the project master plan.

AR 70-17 also states:

When the PMO is established, the timing of the permanent staff buildup to full strength will be consistent with the needs of the project as set forth in the approved table of distribution and allowances (TDA).

*"Source Selection Scheme for Scout System," Defense Industry Bulletin, Winter 1971, p. 19.

In 1966, the Scout Program was initially chartered and a small PMO established. Scout PMO personnel buildup was projected from 13 in 1967 to 37 by mid-1972.

2. Delegation of Authority and Assignment of Responsibility

a. Charter

The Scout Project Manager's Charter has been reissued annually. The current charter, signed by the Secretary of the Army, is dated 12 October 1971. The "Mission" paragraph of the charter provides:

The Project Manager is responsible for project management of the Armored Reconnaissance Scout Vehicle in accordance with DOD Directive 5000.1, AR 70-17, AMCR 11-16, and other pertinent regulations.

The charter's "Authority and Responsibility" section states:

The Project Manager is delegated the full line authority for the centralized management of his specific project, and is responsible for planning, directing, and controlling the allocation and utilization of all resources authorized for execution of the approved project. He is responsible for achieving the technical performance objectives of the project on schedule and at the lowest practicable cost. He is also responsible for research, development, initial procurement, production, distribution, and logistical support to accomplish project objectives. Further, the Project Manager is responsible for assuring that planning is accomplished, and that, except as otherwise directed, the execution of the project conforms to the plan, including implementation by the organizations responsible for the complementary functions of evaluation, logistic support, personnel training, qualitative and quantitative personnel requirements, operational testing and activation or deployment of the system and its related equipment.

b. Army Regulation 70-17

AR 70-17 was issued 19 January 1968. It is under revision in implementation of DoD Directive 5000.1.

With respect to the authority and responsibility of an Army Project Manager, the 1968 AR 70-17 provisions include:

The project manager, chartered by the Secretary of the Army, will have full and continuing responsibility for the development and initial logistic support of the system in accordance with the system development plan. He will exercise full line authority, as defined in the final charter, over the planning, direction, and control of the approved project. He will also exercise authority over the allocation and utilization of all resources authorized for the execution of the approved project.

c. Army Materiel Command Regulation 11-16

AMCR 11-16, "Project Management, Concepts and Policies," provides:

The project management concept of the U. S. Army Materiel Command (AMC) is based upon vesting in a single individual the sole line authority for all planning, direction, control of tasks, and associated resources involved in the development, production, and fielding of a weapon/equipment system. This vertical structure places requests for work and service orders on the supporting organizations. The project manager's authority is only that assigned by the Department of the Army to the Commanding General, AMC. The AMC Command Group monitors negotiations with higher headquarters and other major commands, such as the U. S. Army Combat Developments Command (USACDC) and the U. S. Continental Army Command (USCONARC).

.....

A project manager will be responsible for successful accomplishment of his project. He will exercise executive authority, as defined in the project manager charter, over the planning, direction, and control of the approved project, and over the allocation and utilization of all resources identified and approved in the Five Year Force Structure and Financial Program (FYFSFP) and authorized for obligation for the execution of the approved project.

3. Layers of Authority Above Program Manager

There are three organizational layers of authority between the Secretary of the Army and the Scout Project Manager, as depicted in Figure E-1.

4. Organization of Program Office

The organization of the Scout Project Management Office is depicted in Figure E-2.

Figure E-3 is a simplified organization chart of the U. S. Army Tank-Automotive Command (TACOM).

LAYERS OF AUTHORITY ABOVE
SCOUT PROGRAM MANAGER

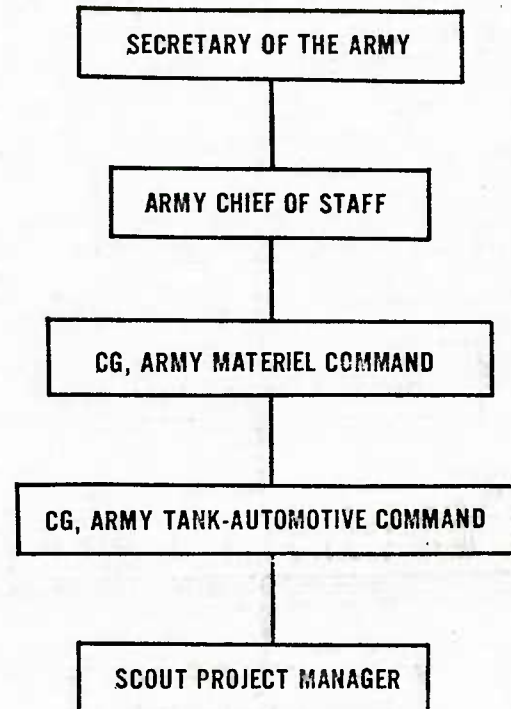


Figure E-1

ORGANIZATION CHART

U.S. ARMY TANK-AUTOMOTIVE COMMAND

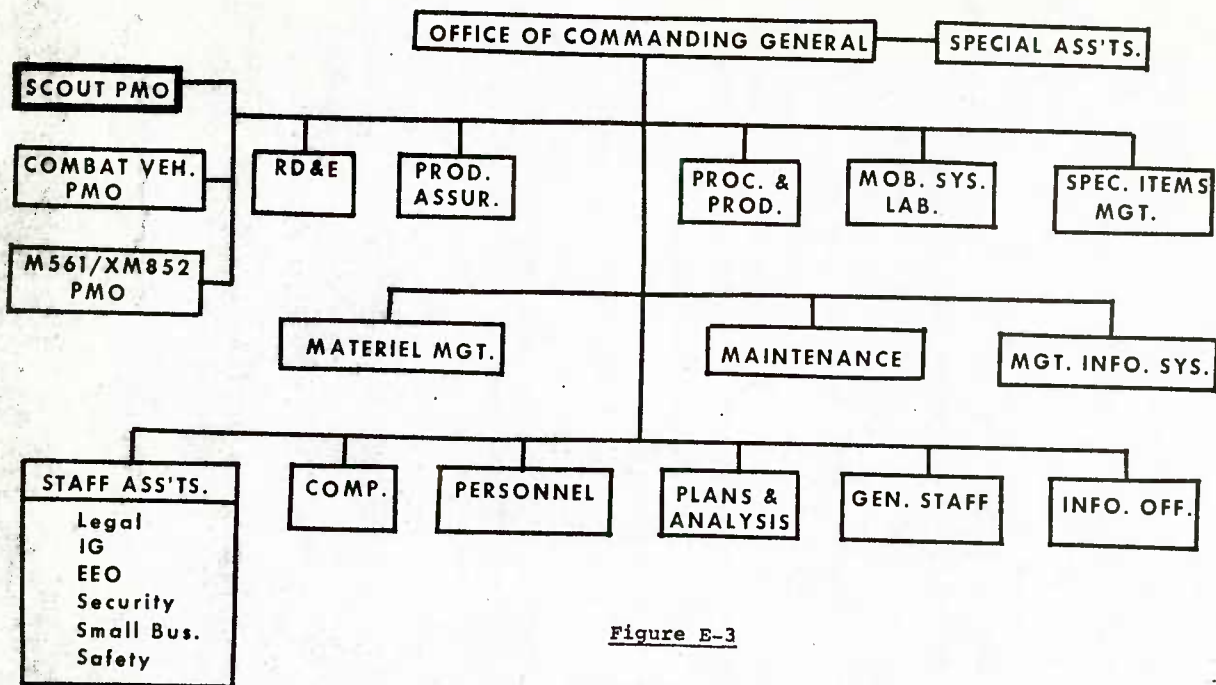


Figure E-3

ORGANIZATION CHART

SCOUT PROJECT MANAGEMENT OFFICE

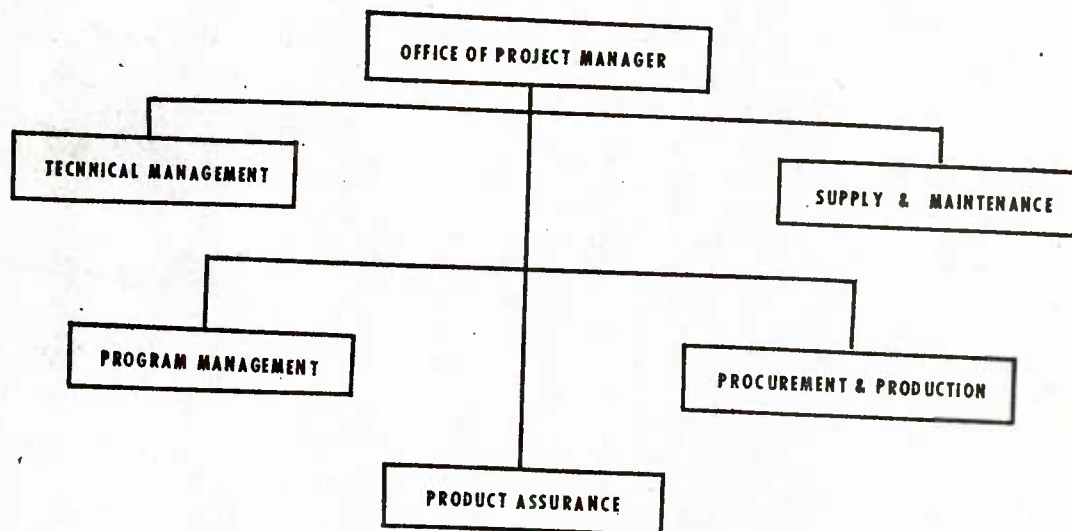


Figure E-2

5. Staffing of Program Office

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a. Project Manager and Deputy

The present Scout Project Manager is an Army Colonel--promoted to that grade effective 13 March, 1972. He assumed Scout Project Management responsibility 10 July 1969. He (and four other Scout PMO personnel) attended the Defense Weapon Systems Management Course at Wright-Patterson Air Force Base, Ohio.

The Deputy Scout Project Manager is a civilian (GS-15). He was detailed to that position in August 1966 and assigned on 30 April 1967. Prior to that time, he served as a technical authority for the Army Mobility Command on development and engineering activities on surface mobility equipment and as Deputy Project Manager for the Close Support Weapon Project, U. S. Army Weapons Command.

b. Project Management Office

As of May 1972, staffing of the Scout PMO was as follows:

	<u>On-Board</u>	<u>Authorized</u>
Civilian	<u>31</u>	<u>32</u>
Military	<u>4</u>	<u>5</u>
<u>Totals</u>	<u>35</u>	<u>37</u>

No personnel from TACOM or U. S. Army Major Commands are presently collocated with the PMO.

Within the PMO, civilians on-board included 2 GS-15s, 7 GS-14s, and 12 GS-13s; assigned military personnel included the Project Manager, 1 Lieutenant Colonel, and 1 Major.

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The original Scout Project Manager selected about 75% of the PMO personnel; the remainder was brought into the PMO as a consequence of a TACOM reduction-in-force which allowed some affected personnel to qualify for Scout PMO spaces.

6. Relationships With Other Organizations

a. With Superiors

As already noted, the Scout Project Manager reports directly to the CG, U. S. Army Tank-Automotive Command (TACOM), who prepares the Project Manager's Officer Efficiency Reports (OERs). The Scout Project Manager has the stature of a Special Deputy to the CG, TACOM--with direct access to him--and is not subject to direction by any TACOM staff element. The Scout Project Manager is responsible to the CG, Army Materiel Command (AMC) through the CG, TACOM. The Deputy CG for Materiel Acquisition, AMC endorses the Scout Project Manager's OERs.

AR 70-17 and the Scout Project Charter both provide that the Project Manager has a direct channel of communication to the Army Chief of Staff and to the Secretary of the Army should any of the participating organizations fail to respond to project requirements in any of the several management areas. As a practical matter of fact, however, those direct channels of communication have not been utilized by the Scout Project Manager.

Direct two-way communications have been established between the Scout Project Manager and the Department of the Army System Staff Officer (DASSO) for the Scout Project. The Scout DASSO is located at Headquarters, Department of the Army, and is the single point of contact at the Army Staff level for all Scout Project matters. He monitors the project and has authority to cut across Army Command lines on Scout Project

matters. There is also a Scout Project representative at Head-93 quarters, AMC, who also has a direct line of communications with the Project Manager and who coordinates project matters within the AMC arena.

The Scout Project Manager made the following observations to LMI:

- The layers of authority above the Scout PMO have created no problems, except in the area of PMO personnel. TACOM controls the number of personnel the Scout PMO is permitted to have. TACOM-imposed limitations upon the personnel spaces the Scout PMO may fill have kept on-board personnel below allowances previously authorized by AMC and higher authority, despite the fact that the PMO could fund total authorized personnel requirements from its R&D program funds. This personnel problem could become even more acute if the PMO is not permitted to build up to its projected authorized strength of 46 people by 1975.

- Reporting directly to the CG, AMC instead of to the CG, TACOM might help the Scout Project Manager in the personnel area, since the PMO spaces would then be controlled directly by AMC. That would be the only significant advantage of a direct reporting channel to the CG, AMC, however.

- Reporting directly to the CG, TACOM has created no problems for the Scout PMO, except in the area of personnel spaces. Although personnel authorization at a higher level was previously obtained from AMC, it is recognized that fund austerity has caused personnel ceiling restrictions at all commands. Consequently, the Scout PMO must compete for spaces within the personnel ceiling assigned to TACOM despite the fact that program funds have been budgeted for additional personnel. This reduces the flexibility to hire personnel rapidly as program responsibilities expand.

- There are four Army Project Managers (including the Scout Project Manager) who report directly to the CG, TACOM. Each of the four programs is in a somewhat different stage of the acquisition process. The four Project Managers enjoy effective working arrangements with the CG, TACOM and among themselves and generate no unduly burdensome management problems for the CG, TACOM. The four Project Managers attend weekly staff meetings held by the CG, TACOM.

- The rank of Colonel for the Scout Project Manager seems to be appropriate at this time. To date, no appreciable difference between the extent of the authority of the Project Manager as a Colonel and as a Lieutenant Colonel has been noted.

- The Scout Department of Army System Staff Officer (DASSO) and the Army Materiel Command System Staff Officer (AMSSO) are invaluable to the Scout Project Manager. They coordinate Scout Project matters in the Washington, D. C. area, conduct briefings, and handle many matters which would otherwise require the attention of the Project Manager.

- We have copies of the Deputy Secretary of Defense's memorandum and DoD Directive 5000.1 (through official and unofficial channels) and are well acquainted with his policies and philosophy on the acquisition of major Defense weapon systems. The Army has implemented many of those policies in the Scout Program. The Program initially contemplated a Total Package Procurement, but has been completely changed from that concept. Because the Scout Program is in an early stage of the acquisition process, it was not as difficult to apply the Deputy Secretary's policies as it would have been if a full-scale development or production contract had already been awarded. A Request for Proposal (RFP) was issued on 15 October 1971. Six companies responded by 28 January 1972 with proposals to develop, fabricate, and deliver to the government four prototype vehicles. The competitors were given considerable freedom with respect to design of the vehicle. The competition was not funded by the Army. In May 1972, two of the competitors were awarded contracts to develop four prototype vehicles each. After a period of extensive testing, it is planned to select one contractor in September 1974 for Advanced Production Engineering/Limited Production.

b. With Functional, Support Organizations

The Scout Project Manager has no formal memorandum of agreement with functional, support elements at TACOM. TACOM Regulation 11-36, "Support of Project/Product Managers," 10 November 1970, is a comprehensive document which sets forth TACOM capabilities available to Project Managers to accomplish specific in-house tasks. It states that each Project Manager will retain overall control of his project, with support furnished by functional directorates as required. The regulation

is considered to be an agreement between TACOM and Project Managers to meet requirements for commodity command support of the Project Managers. Appendixes to the regulation spell out the specific tasks to be performed by the 12 major TACOM Directorates in support of the Project Managers. Provision is also made for supplemental agreements between Project Managers and TACOM Directorates for the performance of tasks not contained in the regulation.

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The Scout Project Manager stated that the regulation serves its purpose well and that he receives responsive, effective support from TACOM functional elements. He also said that such support was better now than it was some three years ago. If he does have difficulties with TACOM functional elements, he has direct access to the CG, TACOM and has his day in court on such matters.

Specific personnel in TACOM functional elements are partially assigned to the Scout Project--but none on a full-time basis. The Scout Project Contracting Officer is in the TACOM Procurement and Production Directorate. He is assigned to the Scout Project but is not collocated with the PMO. He is readily available by telephone and physically located only 20 minutes away from the PMO. The Project Manager said that he would not want the Contracting Officer to be collocated with the PMO, because he could not keep him busy full-time.

The Scout Project Manager stated that his influence with respect to efficiency or performance ratings of functional personnel working on the Scout Project is indirect and usually informal--such as commendatory or critical telephone calls to their superiors. Occasionally, the Project Manager writes a formal letter commending a functional person for outstanding Scout Project work.

The Scout Project Manager has formal support agreements with some 10 other Army organizations which are participating in the project (Army Weapons Command, Army Munitions Command, Electronics Command, Mobility Equipment Command, and others). Those agreements are rather general in nature and are reviewed and updated periodically.

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c. With Staff Specialists--the "Ilities"

The Project Manager advised LMI that considerable emphasis is now being placed upon certain of the "ilities"--especially reliability, maintainability, safety, and human factors. Other items (such as technical manuals) will be given detailed consideration at a later time. The Scout PMO has sliced up the Integrated Logistics Support concept and subjects each proposed requirement to the test of: "Why do we need it now?"

The Project Manager said that the PMO has many informal contacts with AMC "ility" disciplines which are usually helpful.

The Deputy Project Manager said that the PMO enjoys excellent working relationships with and receives strong support from the "ility" specialists.

The only concern voiced with respect to the Scout Program at the Office of the Secretary of Defense (OSD) level was the length of time required for decision-making.

7. Planning, Directing, and Controlling

a. Formal Plans

The Scout PMO prepared or participated in the development and processing of such documents as the:

- Qualitative Materiel Requirement--Developed by the Combat Developments Command, with inputs from the PMO.
- System Development Plan--PMO prepared.
- Development Concept Paper--Initially drafted by the Department of the Army (DA) with assistance from the PMO; then reworked and staffed at AMC, DA, and OSD levels.
- Advance Procurement Plan--PMO prepared and revised to incorporate current Scout Program acquisition concepts.

b. Control of Funds

Scout Program R&D funds come to the PMO from OSD through the Department of the Army, AMC, and TACOM. When the funds come to TACOM, they are earmarked for the Scout Program and cannot be changed by TACOM. Organizational levels above TACOM can and have changed Scout Program funding--but the funding has been increased as well as cut at such levels. The Scout Project Manager said that funding increases had helped the program and that funds had not been cut to the point where any significant planned program action had been seriously impacted.

The PMO develops Scout Program funding requirements and controls program funds. At this point in the program, all PMO requirements (personnel, travel, overtime) are met from Scout Program R&D funds.

c. Reporting

The Scout Project Manager observed that reporting requirements have been reduced over the past three years. The PMO does not find current reporting requirements unduly burdensome.

Master Milestone Schedule reports and periodic Scout Program reviews for the CGs, TACOM and AMC, and for Department of the Army officials are the major reporting requirements. The Scout Program is not yet under the DoD Selected Acquisition Reporting system. Some of the periodic reviews are monthly--others every three months. The PMO welcomes many of those reviews as a means of getting program information up the command line and maintaining higher authority's support for the program.

Scout Program formal briefings at AMC are preceded by dry runs before the CG or Deputy CG, TACOM, and represent the TACOM command position when presented to the CG, AMC. Departments of Army and Defense officials are normally briefed by the Project Manager after an AMC position has been established. Occasionally, higher level officials (AMC, DA, or OSD) are briefed informally without prior lower level pre-briefs.

The Scout PMO has not been overwhelmed by visitors or correspondence.

d. Changes

The Scout Program Qualitative Materiel Requirement has specific "required" and certain "desired" requisites. The Project Manager can trade-off within the range of those established characteristics without the approval of the user--the Combat Developments Command.

The Scout Program Development Concept Paper establishes thresholds upon key technical items, schedule, and cost which cannot be exceeded by the Scout Project Manager.

The industry competitors have considerable latitude with respect to design of the proposed vehicle but cannot

change operational characteristics or schedule milestones without the Project Manager's approval.

e. Contracting

The Scout Program Request for Proposals was prepared by the Scout PMO and reviewed by AMC and Department of the Army officials.

Scout PMO personnel were assigned to the Source Selection Evaluation Board (SSEB), chaired by a senior TACOM civilian employee. Neither the Scout Project Manager or his Deputy are serving on the SSEB, however.

The contracts awarded to the two competitors for development of four prototype vehicles each were Fixed-Price Incentive contracts with an incentive on cost only. DoD Cost/Schedule Control Systems Criteria (C/SCSC) are emphasized, and the two prototype competitors will be validated for implementation of C/SCSC within eight months after contract award.

The Advanced Production Engineering/Limited Production contract awarded to the winning contractor will be a Cost-Plus-Incentive-Fee contract with an incentive on cost.

The Project Manager advised LMI that he plans to position a military officer at each of the two prototype competitors' plants--to act in a liaison capacity between the Project Manager and those contractors.

F-14/PHOENIX PROGRAM

1. Background

a. Purpose*

The purpose of the F-14 Aircraft/PHOENIX Missile Weapon System Project is the definition, development, test and evaluation, acquisition, and initial support of the F-14/PHOENIX Weapon System. The F-14 aircraft is to be procured as an improved high performance air superiority/Fleet Air Defense fighter in the 1973-1985 time frame. The F-14 will be a two-man, supersonic, carrier based aircraft with an all-weather capability for delivery of the PHOENIX and SPARROW missiles against long and mid-range targets. It will also employ a 20 mm cannon and SIDEWINDER missiles for close-in air-to-air combat.

The Weapons Control System consists of a fire control system and associated launchers. It employs the long range air-to-air PHOENIX missile against aircraft and missile targets.

The mission of the F-14/PHOENIX Project Manager is set forth in his charter:

The Project Manager's primary mission is to provide to the operating forces of the Navy and Marine Corps, a fully supported F-14/PHOENIX Weapon System which will satisfy approved operational requirements.

b. Project Management Office

A small VFX Project Management Office (PMO) was set up in the spring of 1968, when the Navy decided to procure the VFX aircraft in lieu of the F-111B aircraft.

*Paraphrased from Charter for the F-14/PHOENIX Weapon System Project Manager, Enclosure (1) to NAVAIRINST 5400.10B, "F-14 Aircraft/PHOENIX Missile Weapon System Project (PMA 241); designation of," 16 October 1969.

The VFX Aircraft/PHOENIX Weapon System Project was initially chartered in July 1968; that charter was updated in October 1969 to reflect the designation of the program as the F-14/PHOENIX.

2. Delegation of Authority and Assignment of Responsibility

a. Secretary of the Navy Instruction 5000.1

SECNAVINST 5000.1, "System Acquisition in the Department of the Navy," 13 March 1972, implemented DoD Directive 5000.1 within the Department of the Navy. The SECNAVINST establishes policy and management principles for acquisition of systems within the Department of the Navy and consolidates SECNAV, Office of the Chief of Naval Operations (OPNAV), Headquarters, Marine Corps (HQMC), and Naval Material Command (NAVMAT) systems acquisition policy.

Enclosure (1) to the SECNAVINST is DoD Directive 5000.1. Enclosure (2) lists 28 SECNAV, OPNAV, and NAVMAT Instructions cancelled by the SECNAVINST. Enclosure (4) references 55 Department of the Navy related policy documents for review for policy consistency with DoD Directive 5000.1 and revision and consolidation as appropriate.

SECNAVINST 5000.1 also precluded the necessity for successive OPNAV and NAVMAT implementing instructions.

The basic SECNAVINST provides that the Chief of Naval Material (CNM), under the Chief of Naval Operations (CNO), is assigned responsibility for the establishment, application, and execution of project management (synonymous with the term "Program Management" as used in DoD Directive 5000.1) within the Department of the Navy less the Marine Corps; it also provides that the Commandant of the Marine Corps (CMC)

is authorized to execute project management responsibilities with respect to systems developed or procured by HQMC.

Enclosure (3) to SECNAVINST 5000.1 sets forth policy, relationships, and responsibilities with respect to Department of the Navy systems acquisition. Provisions especially pertinent to this LMI task include:

- Responsibility and authority for the acquisition of major systems shall be decentralized to the maximum practicable extent, consistent with the urgency and importance of each program. The wide variety of acquisition programs mandates flexibility in the management of such programs to meet the specific needs of each. Programs shall be structured and managed such that constraints are not artificially imposed, nor permitted to unduly affect attainment of program objectives.

- Designated Project Managers shall report directly to their chartering authority and such reporting relationships shall be clearly delineated in each charter. The implementing instruction promulgating project charters shall be signed by the Chief of Naval Material or a Systems Commander. Such authority may not be delegated unless approved by the Chief of Naval Material. The Chief of Naval Material shall determine the project chartering level--first preference being given to a SYSCOM level project. Project Managers will normally hold the rank of Captain/Colonel, comparable civilian grade, or, in exceptional cases, a Flag Rank. Unrelated duties shall not be assigned to a Project Manager. Staffing of project offices shall be commensurate with assigned project objectives; maximum support shall be provided by Systems Command (Marine Corps) functional organizations, Navy laboratories, and appropriate field activities. Such participating organizations shall be specified in the project charter.

• Specific Authority

a. Unless specifically waived by the CNM or CMC, each charter shall, by reference to this Instruction, include specific delegation of the following authority to:

(1) Make necessary technical and business management decisions on all matters within the scope of the charter, other than those for which an appropriate Contracting Officer is responsible.

(2) Exercise control over all resources authorized, allocated for obligation, and approved in the Budget and Five Year Defense Program.

(3) Establish work tasks, schedules for accomplishment, and to approve cost estimates and procurement requests.

(4) Issue under the Project Manager's own signature, necessary correspondence, technical directives, planning directives, management plans, instructions* etc., to ensure proper management of the project.

(5) Prepare and sign fitness and efficiency reports on personnel assigned to his immediate office and other specifically designated personnel.

b. A chartered Project Manager shall not have the authority to deviate from established policy.

c. Communication, action or inaction, in any form which contractors may interpret as directional in nature shall be conducted through or with the concurrence of an appropriately assigned contracting officer.

* The term "instructions" shall not, however, be interpreted to mean "Instructions" or "Notices" in the Navy Directives System.

• Specific Responsibilities

Within their chartered responsibilities, designated Project Managers shall exercise technical and business management and direction over the accomplishment of project objectives. This includes, but is not limited to, responsibility for: (1) feasibility determinations; (2) conduct of trade-off analysis and cost effectiveness studies within cost, performance, broad characteristics and schedule parameters established by the CNO and/or CMC; (3) approval of system designs, engineering releases for production, engineering reports, and engineering changes; (4) ensuring the implementation and direction of programs to correct equipment deficiencies; (5) ensuring proper selection, tailoring, and application of techniques and management disciplines required for problem identification, appropriate assessment of program progress and timely reporting of same to higher authority; (6) ensuring timely planning, including a Project Master Plan and a Transition/Disestablishment Plan; and (7) ensuring compliance with the provisions of instructions referenced by enclosure (4) hereto.

• Functional Support

Project and Acquisition Managers will be fully supported by Navy functional organizations, generally those within a SYSCOM or Bureau. Functional managers and staff personnel are responsible for recommending certain actions; however, decision responsibility rests with the Project or Acquisition Manager. Where the Project or Acquisition Manager decides to act contrary to functional policies and objectives, the matter will be referred by him to higher authority for resolution. Actions directed by the Project or Acquisition Manager, however, shall be pursued during the period pending resolution. The purpose of this provision is not to confer unbridled authority upon Designated Project or Acquisition Managers; rather, the intent is to specify the mechanism for resolving differences, and to preclude disruption of the acquisition process.

b. Naval Air Systems Command Instruction 5000.8

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NAVAIRINST 5000.8, "Project Management/Coordination in the Naval Air Systems Command Headquarters," 2 December 1971, sets forth policies and procedures applicable to project management in the Naval Air Systems Command Headquarters (NAVAIR). Provisions pertinent to this LMI study include:

- Project Managers shall be assigned with central executive direction and control of project work efforts with direct reporting responsibility to COMNAVAIR and with authority to short-cut normal chain of command lines. They shall head Project Management Offices which shall be administratively coordinated and supported by the Deputy Commander for Plans & Programs, and Comptroller.
- The use of Project Management is usually directed by COMNAVAIR or higher authority and requires a charter signed by COMNAVAIR and approved by the Chief of Naval Material. Unless otherwise specified, work in support of Designated Projects shall be given priority over that associated with other projects or programs. The number of designated projects shall be held to a minimum.
- Project Teams shall be utilized as coordinating mechanisms for planning and implementing Project efforts on a command-wide basis for the purpose of maintaining an effective balance between centralized direction/control and decentralized execution of their efforts.
- Team members from functional organizations shall be responsible and responsive to Project Managers/Coordinators through the appropriate Assistant Project Manager/Coordinator as well as to their supervisors in their parent organizations. Full cooperation and support of the Project Team concept is essential and will be required for effective Project Management/Coordination.
- Major disagreements between the Project Manager/Coordinator and functional groups shall be referred to the Deputy Commander and Assistant Commanders concerned, or appropriate higher authority, for resolution. When disagreements

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occur on Designated Projects or Projects coordinated by the Plans & Programs and Comptroller Group, the actions directed by the Project Manager/Coordinator shall be instituted or continued during the period pending resolution.

- The Project Manager/Coordinator shall integrate and justify all cost estimates for his project during programming/budgeting exercises. He shall direct and control the use of all funds assigned to him for the prosecution of the Project. He shall be given maximum flexibility for reprogramming of Project funds within the limits authorized in applicable Navy and Defense Department directives. All changes made in cost estimates and allocations of approved project funds within the Command shall be subject to the concurrence of the appropriate Project Manager/Coordinator.
- The functional responsibilities of a Project Manager/Coordinator are those common to executives, i.e., planning, organizing, coordinating, controlling, directing implementation, and appraising. To be effective, he must be given authority commensurate with his responsibility. Accordingly, he stands in a position to receive credit for successful accomplishment or to accept consequences of failure. He does not normally exercise technical direction in technical matters or direct engineers/specialists associated therewith. These functional responsibilities remain with secondary managers in the functional organizations. However, the Project Manager/Coordinator is responsible for overall management decisions relative to these functions within his Project, and when necessary, must inject himself into these areas and make decisions to ensure that objectives, schedules, cost and performance are planned, met or revised in accordance with overall requirements imposed by higher authority.
- Contract administration performed by the Project Manager/Coordinator does not include the specific responsibility and authority of a "contracting officer." The Contracting Officer is the only Command agent who has the responsibility and authority to conduct contract price negotiation and

to alter the scope and terms of a contract. During these transactions, the Contracting Officer will maintain a close communication and working relationship with the Project Manager/Coordinator and other appropriate members of the Project Team.

c. Charter

A general statement of the authority and responsibilities of the F-14/PHOENIX Project Manager is contained in the 16 October 1969 NAVAIR Charter:

The Project Manager is the single central executive responsible for the successful management of the Project and accomplishment of the objectives stated in this Charter. He has broad directive authority within the scope of the Project over the planning, direction, control, and utilization of resources of the approved Project and over Project efforts of in-house and contractor organizations, including assignment of responsibility, as appropriate, to the various NAVAIR functional organizational elements in accordance with the overall framework outlined in the NAVAIR Organization Manual. As the responsible executive he is expected to act on his own initiative in matters affecting the Project. In those cases where action is required beyond the authority granted in this Charter, he shall refer the action to higher authority with his recommendations, including alternatives available.

3. Layers of Authority Above Program Manager

There are three organizational layers of authority between the Secretary of the Navy and the F-14/PHOENIX Project Manager, as depicted in Figure F-1.

4. Organization of Program Office

The organization of the F-14/PHOENIX Project Management Office is depicted in Figure F-2.

Figure F-3 is a simplified organization chart of the Naval Air Systems Command Headquarters.

LAYERS OF AUTHORITY ABOVE
F-14 PROGRAM MANAGER

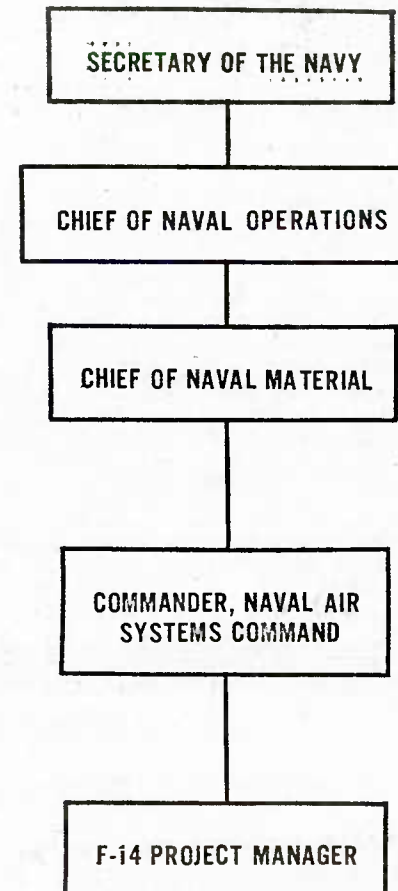


Figure F-1

ORGANIZATION CHART NAVAL AIR SYSTEMS COMMAND

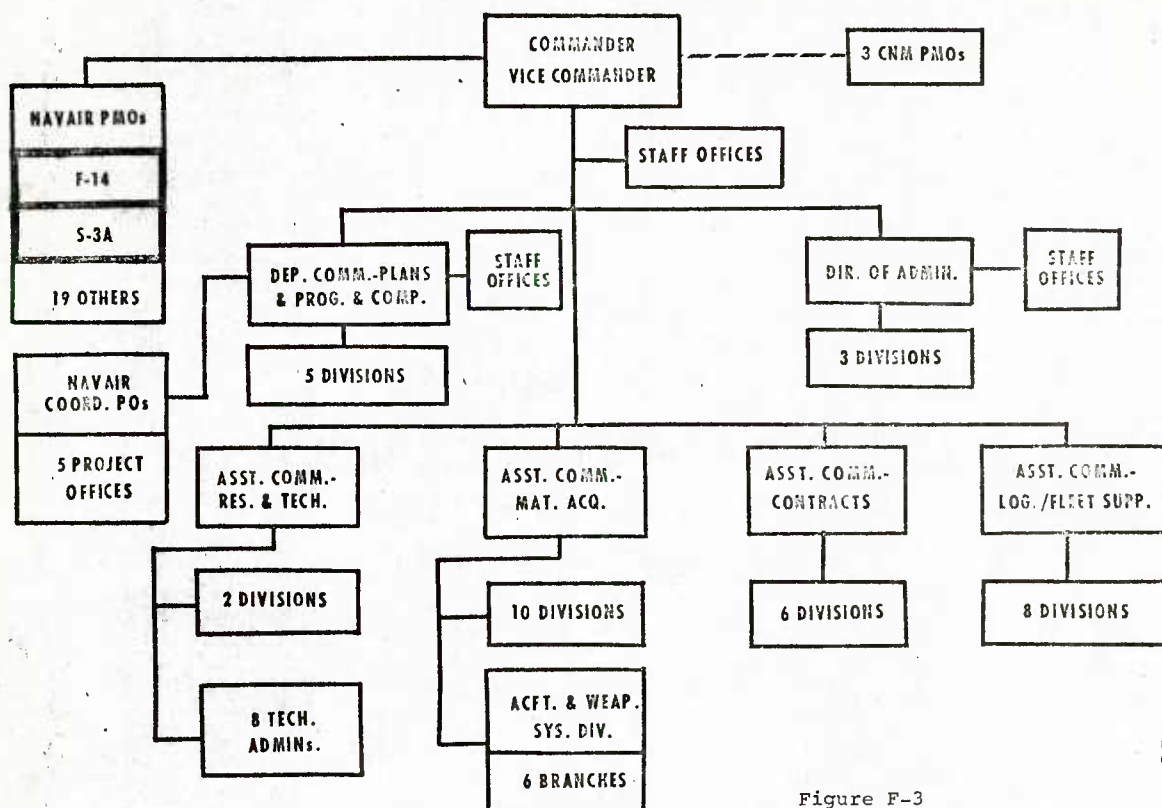
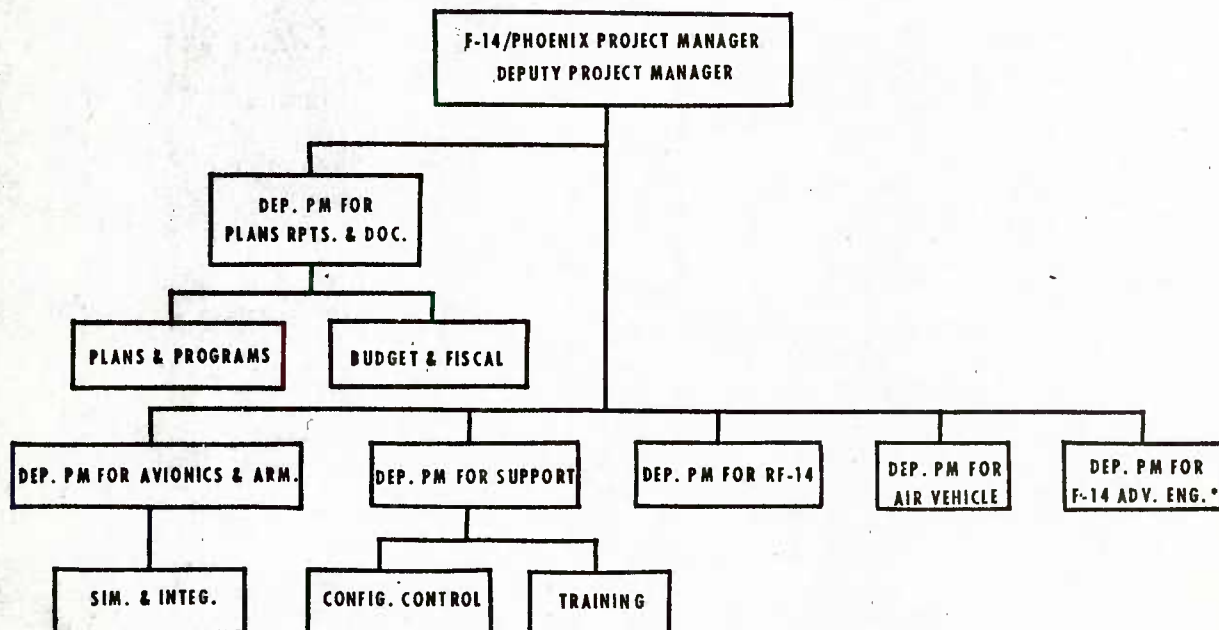


Figure F-3

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ORGANIZATION CHART F-14/PHOENIX PROJECT MANAGEMENT OFFICE



* PHYSICALLY LOCATED AT WPAFB, OHIO

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5. Staffing of Program Office

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a. Project Manager and Deputy

The present F-14/PHOENIX Project Manager is a Navy Rear Admiral--frocked to that grade effective June 1971, and promoted to that grade effective 1 July 1972. He was assigned duty as the F-14 Project Manager in July 1971. Prior to that time, he was Commanding Officer of the USS FORRESTAL (CVA-59). Other previous duty assignments included command of the USS DIAMOND HEAD (AE-19), command of the first A-6 squadron, and an A-6 replacement training squadron. He also served in the Flight Test Division of the Naval Air Test Center (NATC) at Patuxent River, and as the A-6 Program Coordinator in the Aviation Requirements Branch, OPNAV.

The Deputy Project Manager is a civilian (GS-15). He was assigned to that position in December 1968. Prior to that time, he worked in weapons development management in industry. He is also a former Naval aviator who, while on active duty, served in NAVAIR as F-111B Assistant Program Manager and as Fleet Program Manager for the fleet introduction of the A-7 aircraft.

b. Project Management Office

As of June 1972, staffing of the F-14/PHOENIX Project Management Office was as follows:

	<u>On-Board</u>	<u>Authorized</u>
Civilian	<u>11</u>	<u>13</u>
Military	<u>9</u>	<u>9</u>
<u>Totals</u>	<u>20</u>	<u>22</u>

Within the Project Management Office, civilians on-
board included 1 GS-15, 4 GS-14s, and 3 GS-13s; assigned military personnel included the Project Manager, 2 Captains, 3 Commanders, and 3 Lieutenant Commanders.

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6. Relationships With Other Organizations

a. With Superiors

As already noted, the F-14/PHOENIX Project Manager reports directly to the Commander, Naval Air Systems Command (COMNAVAIR), who signs the Project Manager's Fitness Reports.

The Project Manager has a direct telephone "hot-line" to COMNAVAIR. He meets with COMNAVAIR almost daily, and COMNAVAIR maintains high visibility on the F-14/PHOENIX Project. The Project Manager does not attend COMNAVAIR's weekly staff meetings.

The F-14/PHOENIX Project Charter provides that the Deputy Commander for Plans and Programs, and Comptroller, NAVAIR, will provide necessary organizational, administrative, planning, programming, and financial support to the Project Manager for the purpose of overall Command coordination. The F-14/PHOENIX PMO coordinates certain matters with the staff of the Deputy Commander for Plans and Programs, and Comptroller--especially with his Management Support and Project Coordination Divisions. The Project Manager sends a representative to weekly staff meetings conducted by the Director of the Project Coordination Division.

The Project Manager frequently briefs the Chief of Naval Material and meets with him two or three times a week. PMO personnel have occasional dealings with Naval Material Command staff elements.

In the Office of the Chief of Naval Operations,
there are:

- A F-14/PHOENIX Program Sponsor--who has primary responsibility for the overall planning and development of the operational objective or requirement for the Project.
- A F-14/PHOENIX Appropriation Sponsor--who is responsible for effecting coordination with the F-14/PHOENIX Program Sponsor when formulating financial programming or changes to financial programming which affect financial support of the Project.
- A F-14/PHOENIX Program Coordinator--who has responsibility for maintaining an overview of the development, acquisition, and planning for the logistics support of the Project. He acts as the single point of contact within OPNAV for all matters concerning the Project.

The F-14/PHOENIX Project Manager and his staff have extensive, continuing, and close working relationships with those OPNAV representatives and consider them to be extremely valuable and essential to successful management of the Project.

The Project Manager and his staff have "as required" contacts with the Navy Secretariat, and the Secretary of the Navy has called the Project Manager directly on some Project matters.

The Project Manager and the PMO have received strong support from certain elements of the Office of the Secretary of Defense, especially the Offices of the Director of Defense Research and Engineering and Assistant Secretary of Defense (Comptroller).

The F-14/PHOENIX Project Manager made the following observations to LMI:

- I would not want to work through any fewer layers of authority than now exist between the Secretary of the Navy and myself. I need the support and expertise of COMNAVAIR, CNM, and CNO. The NAVAIR Deputy Commander for Plans and Programs, and Comptroller is not an organizational layer of authority between COMNAVAIR and myself.
- A major advantage is my two-star rank. Having a Rear Admiral in this billet enables the Project Manager to overcome roadblocks and to talk as a peer with Flag Officers in other Navy organizations. The prestige of the rank should not be used indiscriminately, but it is a distinct advantage. We need a lot of help on this Project and try to work harmoniously with our supporting organizations. Most problems are worked out at middle-management organizational levels, and it has not yet been necessary to call upon COMNAVAIR to settle a disagreement.
- The Deputy Secretary of Defense's memoranda and policy statements on military program management have effected reductions in reporting and other requirements previously levied on Project Managers.

b. With Functional, Support Organizations

The F-14/PHOENIX Project organization is an example of the Navy's "matrix" management philosophy of program management. The PMO is small, and virtually all support for the Project is provided by existing Navy functional elements (primarily within NAVAIR) or other participating Navy organizations.

The F-14/PHOENIX Charter provides:

The Project Manager will be fully supported by the functional organizations of the Naval Air Systems Command. Representatives of these organizations will

be assigned as members of the Project Manager's Project Team and will plan and implement Project efforts under the direction of the Project Manager. When conflicts between Project and functional policies and objectives develop that cannot be resolved, the matter will be referred to the Commander, Naval Air Systems Command, for resolution. Actions directed by the Project Manager, however, shall be instituted during the period pending resolution.

The Charter also designates by name 17 Assistant F-14/PHOENIX Assistant Project Managers within NAVAIR as the cadre of key Project personnel from NAVAIR functional groups. The Charter also lists 15 Navy organizational elements participating in the Project and performing tasks assigned by the Project Manager.

A NAVAIR F-14/PHOENIX Project Team Directory of 1 October 1971 lists 95 personnel by name within NAVAIR functional organizations (including the 17 Assistant Project Managers) who have responsibilities for support of the Project.

The Project Manager is authorized to prepare fitness report worksheets or concurrent fitness reports on some of the Project's key military functional personnel (such as the Assistant Project Managers).

The Project Manager's comments to LMI included:

- I'm not sure the Navy's "matrix" project management system is the best, but I'm not sure it's wrong. The Air Force "vertical" management system does provide tighter control. A small Project Office enables the Project Manager to pinpoint responsibilities effectively, however.
- The great majority of our functional support comes from NAVAIR organizational elements located in the Washington, D.C. area. Generally speaking, those groups work well together and are responsive. The Project has considerable

expertise and good people to draw upon when they are properly used. One of my major problems, however, is the inordinate time it takes to get a paper processed. It is difficult to instill in functional personnel the degree of enthusiasm or sense of urgency which PMO personnel have for the Project.

- We do not have an effective "follow-up" capability in the PMO. The Project could profitably utilize one officer solely for the purpose of following-up on and expediting supporting organizations.
- The F-14/PHOENIX Project Contracting Officer is assigned to the NAVAIR Assistant Commander for Contracts and is not collocated with the PMO. The staff of the Assistant Commander for Contracts is generally responsive to the Project's requirements but is frequently diverted to other matters. I would prefer to have the F-14/PHOENIX Contracting Officer collocated with the PMO. I could keep him busy 100% of the time, and I believe that the magnitude of the F-14 project would justify his collocation. If he were collocated, he would be able to maintain greater familiarity with the progress and flavor of the Project.
- Generally speaking, I exercise essentially no influence on the performance ratings or promotion of civilian functional personnel associated with the F-14/PHOENIX Project outside of the PMO.

c. With Staff Specialists--the "Ilities"

The Project Manager advised LMI that staff specialists and the "ility" disciplines have been generally helpful and have created no serious problems. The Project Manager said that the Project needs the expertise and support of specialists on NAVAIR, NAVMAT, and OPNAV staffs.

7. Planning, Directing, and Controlling

a. Formal Plans

The F-14 Specific Operational Requirement (SOR) was developed by OPNAV, with technical inputs from NAVMAT and NAVAIR.

The F-14/PHOENIX PMO prepared or participated in the development and processing of such documents as the:

- Technical Development Plan--PMO participated and is responsible for preparation, with significant inputs from NAVAIR functional elements.
- Development Concept Paper--PMO prepared proposed draft, with considerable assistance from functional elements; OPNAV reviewed and submitted to ODDR&E for their OSD coordination and approval.
- Advance Procurement Plan--PMO prepared, with assistance from NAVAIR functional groups; approved by CNM.
- Selected Acquisition Reports (SARs)-- PMO originates.

b. Control of Funds

The PMO controls all F-14/PHOENIX Program R&D and Procurement of Aircraft and Missiles, Navy funds, except for spares' procurement funds.

Funds for payment of overtime to PMO personnel are controlled by the Office of the Deputy Commander for Plans and Programs, and Comptroller and the NAVAIR Organization and Manpower Management Office.

Personnel ceilings are also controlled by the Office of the Deputy for Plans and Programs, and Comptroller and the NAVAIR Organization and Manpower Management Office. PMO requests for personnel are processed through those offices. Personnel ceiling restrictions or cut-backs impact both the PMO and the NAVAIR functional elements which support the Project.

The original F-14/PHOENIX Project Manager brought in most of the initial PMO personnel. The present Project Manager advised LMI he has complete authority within the limits of Navy Regulations with respect to military personnel assigned to the PMO and within Civil Service Commission regulations on civilian personnel. His military authority permits more direct and definitive timely action with regard to military personnel than does his authority with respect to civilian personnel.

c. Reporting

The Selected Acquisition Report (SAR) is the major reporting requirement. The Project Manager observed that the SAR is an effective reporting vehicle. The PMO does not consider current reporting requirements to be unreasonable. Reporting requirements have been reduced during the past two or three years.

The Project Manager does not believe that current briefing requirements are inordinate; he often desires to brief Department of Defense officials on the program to keep them up to date and to maintain their support. Briefings are seldom preceded by dry runs.

d. Changes

The F-14/PHOENIX Project Charter provides:

The Project Manager shall evaluate and document the effect of proposals to increase or decrease the resources authorized for the execution of the Project and shall determine the effect of the proposed changes on approved cost, schedules, Advance Procurement Plans and performance objectives. The Project Manager's evaluation will be considered by officials having final decision authority during deliberations on Program Change Requests and on the budget.

The CNO or CMC shall be informed through channels, including CNM, in any instance where the requirements of the Designated Project cannot be met within the resources and time available. 119

The Project Manager confirmed that he has considerable influence with respect to anything which affects cost, schedule, or performance of the weapon system. He must insure that funding is available for proposed changes and approve them before they are presented to the NAVAIR Configuration Change Control Board.

e. Contracting

The PMO participated in the preparation of the Request for Proposals and in Source Selection Evaluation Board (SSEB) activities. The initial Project Manager served on the SSEB.

S-3A PROGRAM

1. Background

a. Purpose*

The purpose of the S-3A Weapon System Project Office is to provide overall Navy management of all phases of the development, test and evaluation, production, and initial fleet support of the S-3A Weapon System. The S-3A is an advanced carrier based Anti-submarine Warfare (ASW) aircraft weapon system. The aircraft will be powered by two turbofan engines; its highly integrated ASW avionics system is designed around a general purpose digital computer. The aircraft and its systems will be operated by a crew of four.

The mission of the S-3A Weapon System Project Manager is set forth in his charter:

The Project Manager's primary mission is to provide to the operating forces of the Navy, fully supported S-3A Weapon Systems which will satisfy approved operational requirements.

b. Project Management Office

A VS(X) Project was established and a small Project Management Office (PMO) set up in February 1966. The current charter, dated 2 January 1970, provides continuity of the VS(X) Project under the revised title of the S-3A Weapon System Project.

* Paraphrased from Charter for the S-3A Weapon System Project Manager, Enclosure (1) to NAVAIRINST 5400.9A, "S-3A Weapon System Project (PMA 244); designation of," 2 January 1970.

2. Delegation of Authority and Assignment of Responsibility

- a. Secretary of the Navy Instruction 5000.1
(See Appendix F, pages 2 through 5.)
- b. Naval Air Systems Command Instruction 5000.8
(See Appendix F, pages 6 through 8.)

c. Charter

A general statement of the authority and responsibilities of the S-3A Weapon System Project Manager is contained in the 2 January 1970 Naval Air Systems Command (NAVAIR) Charter:

The Project Manager is the single central executive responsible for the successful management of the Project and accomplishment of the objectives stated in this Charter. He has broad directive authority within the scope of the Project over the planning, direction, control and utilization of resources of the approved Project and over Project efforts of in-house and contractor organizations, including assignment of responsibility, as appropriate, to the various NAVAIR functional organizational elements in accordance with the overall framework outlined in the NAVAIR Organization Manual. As the responsible executive he is expected to act on his own initiative in matters affecting the Project. In those cases where action is required beyond the authority granted in this Charter, he shall refer the action to higher authority with his recommendations, including alternatives available.

3. Layers of Authority Above Program Manager

There are three organizational layers of authority between the Secretary of the Navy and the S-3A Project Manager, as depicted in Figure G-1. Each has direct access to the Project Manager, when desired or necessary, and he, in turn, has direct access to each of them.

4. Organization of Program Office

The organization of the S-3A Project Management Office is depicted in Figure G-2.

Figure G-3 is a simplified organization chart of the Naval Air Systems Command Headquarters.

LAYERS OF AUTHORITY ABOVE
S-3A PROGRAM MANAGER

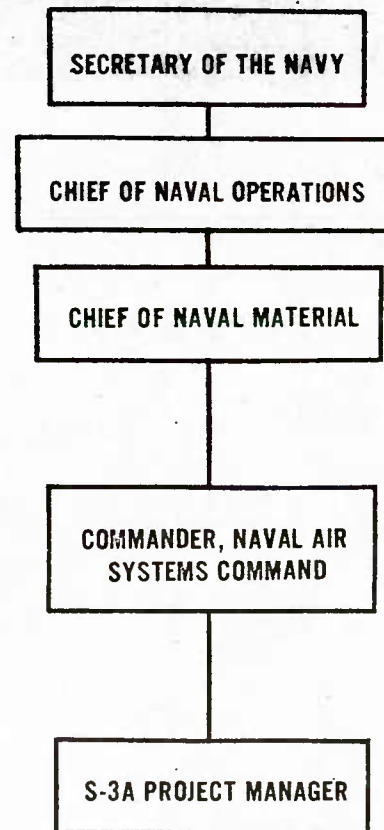


Figure G-1

NAVAL AIR SYSTEMS COMMAND

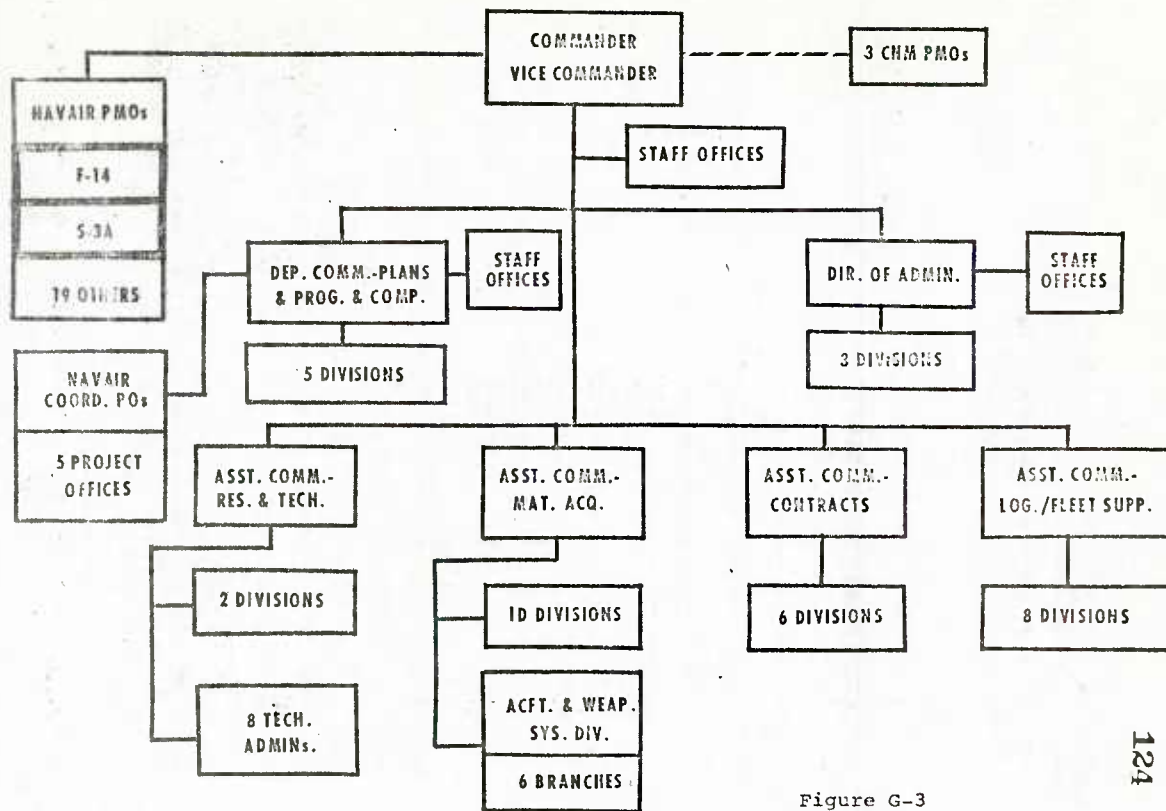


Figure G-3

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ORGANIZATION CHART S-3A PROJECT MANAGEMENT OFFICE

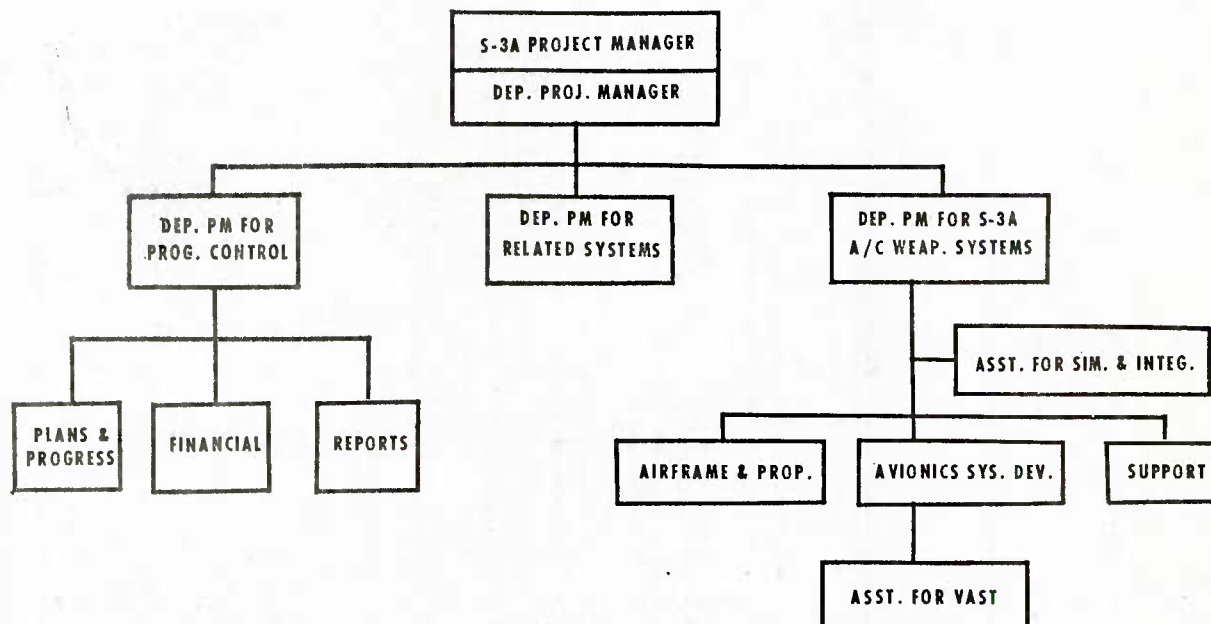


Figure G-2

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5. Staffing of Program Office

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a. Project Manager and Deputy

The present S-3A Project Manager is a Navy Rear Admiral--promoted to that grade effective May 1972. He was assigned duty as the S-3A Project Manager in September 1968--at which time he was a Captain. He is an Aeronautical Engineering Duty Officer. Prior duty assignments include a tour with a patrol squadron, the Naval Air Test Center, the Navy Test Pilot School, Commander Operational Test & Evaluation Force, the Naval Air Development Center, and manpower manager for NAVAIR just before his assignment to the S-3A Program.

The Deputy Project Manager is a civilian (GS-15). He was assigned to that position in November 1970. Prior to that time, he was Senior Engineer of the Attack Aircraft Class Desk in NAVAIR for many years.

b. Project Management Office

As of June 1972, staffing of the S-3A Project Management Office was as follows:

	<u>On-Board</u>	<u>Authorized</u>
Civilian	<u>11</u>	<u>11</u>
Military	<u>4</u>	<u>5</u>
<u>Totals</u>	<u>15</u>	<u>16</u>

Within the Project Management Office, civilians on-board included 1 GS-15, 4 GS-14s, and 3 GS-13s; assigned military personnel included the Project Manager, 1 Captain, 1 Commander, and 1 Lieutenant Commander.

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6. Relationships with Other Organizations

a. With Superiors

As already noted, the S-3A Project Manager reports directly to the Commander, Naval Air Systems Command (COMNAVAIR), who signs the Project Manager's Fitness Reports.

The Project Manager has a direct telephone "hot-line" to COMNAVAIR. The Project Manager meets frequently with COMNAVAIR and keeps the latter advised on sensitive matters and significant achievements or problems.

The S-3A Weapon System Project Charter provides that the Deputy Commander for Plans & Programs, and Comptroller, NAVAIR, will provide necessary organizational, administrative, planning, programming, and financial support to the Project Manager for the purpose of overall Command coordination. The S-3A Project organizational chart (an enclosure to the NAVAIRINST issuing the Charter) shows a dotted "coordination" line from the Project Manager to the Deputy Commander for Plans & Programs, and Comptroller. The S-3A PMO coordinates many matters with the staff of the Deputy Commander for Plans & Programs, and Comptroller--especially with his Management Support and Project Coordination Divisions. S-3A PMO personnel stated that there are occasions when the staff of the Deputy Commander for Plans & Programs, and Comptroller could be more helpful by handling inquiries from higher headquarters themselves instead of requiring inputs from the PMO. The S-3A Project Manager or his representative attends weekly meetings conducted by the Director of the Project Coordination Division.

The S-3A PMO has an important interface with the Manager, Anti-submarine Warfare (ASW) Systems Project, who reports directly to the Chief of Naval Material (CNM). The S-3A Project Charter provides that a member of the ASW Systems Project staff will be an official member of the S-3A Project Team as an Assistant Project Manager. This organizational relationship is intended to provide a special means of rapid and continuous communication and coordination between the two organizations.

The S-3A PMO has occasional dealings with staff elements of the Naval Material Command Headquarters (NAVMAT) and has received excellent support from the Office of the Deputy CNM for Procurement and Production.

In the Office of the Chief of Naval Operations (OPNAV), there are a S-3A Program Sponsor, a S-3A Appropriation Sponsor, and a S-3A Program Coordinator. S-3A PMO personnel are in continuous contact with those OPNAV personnel and consider them to be invaluable. The S-3A Project has also received strong support from OPNAV senior Flag Officers.

The Project has been supported by the Navy Secretariat and has enjoyed the personal, continuing interest of the former Under Secretary of the Navy, now the Secretary of the Navy.

The Deputy Secretary of Defense and elements of the Office of the Secretary of Defense (OSD) have supported the S-3A Project.

The S-3A Project Manager made the following observations to LMI:

- I do not believe there are too many layers of authority between the Secretary of the Navy and myself. Reporting to COMNAVAIR provides more direct access to the Project's major supporting, functional elements within NAVAIR than if I were to report directly to CNM or CNO.
- The S-3A PMO staffs many administrative matters through the Office of the Deputy Commander for Plans & Programs, and Comptroller, NAVAIR. On urgent matters, however, I go directly to COMNAVAIR and keep the Deputy Commander for Plans & Programs, and Comptroller informed. That Deputy Commander is not an organizational layer of authority between COMNAVAIR and myself.
- I am sure that I will receive more responsive support from functional elements as a Rear Admiral than I did as a Captain.

b. With Functional, Support Organizations

The S-3A Project organization is another example of the Navy's "matrix" management philosophy on military program management. The PMO is small--with substantially all support provided by existing Navy functional elements (primarily within NAVAIR) or other participating Navy organizations.

The S-3A Charter provides:

The Project Manager will be fully supported by the functional organizations of the Naval Air Systems Command. Representatives of these organizations will be assigned as members of the Project Manager's Project Team and will plan and implement Project efforts under the direction of the Project Manager. When conflicts between Project and functional policies and objectives develop that cannot be resolved, the matter will be referred to the Commander, Naval Air Systems Command, for resolution. Actions directed by the Project Manager, however, shall be instituted and/or continued during the period pending resolution.

The Charter designates by name eight S-3A Assistant Project Managers as the cadre of key Project NAVAIR functional personnel. The Charter also lists 18 Navy organizations participating in the Project and performing tasks assigned by the Project Manager.

Virtually all of the NAVAIR functional personnel who support the S-3A Project are located in the Washington, D. C. area. Some functional personnel are dedicated to the Project substantially full time; others are not. The S-3A Contracting Officer is assigned to the Office of the NAVAIR Assistant Commander for Contracts and works almost full time on the Project, but he is not collocated with the PMO. The S-3A Project Team meets regularly every two weeks, and a fairly close interface relationship is maintained with the Assistant Project Managers.

The Project Manager is authorized to prepare fitness report worksheets on those officers who are junior to him in rank and who directly support the Project--including Assistant Project Managers in functional groups of NAVAIR. The Project Manager usually does not attempt to influence performance ratings on civilians working on the Project in NAVAIR functional organizations.

The S-3A Project Manager's comments to LMI included:

- Generally speaking, I believe the Navy "matrix" management philosophy on program management is technically preferable to the "vertical" management concept. I couldn't justify a very large PMO. There are some qualifications to that statement, however. For example, previously approved but vacant S-3A PMO billets have disappeared, and I could profitably utilize a few more PMO personnel.

- I would like to have the S-3A Project Contracting Officer collocated with the PMO; we have had good support generally in this area but have experienced some problems with respect to action on certain matters--such as the negotiation of Engineering Change Proposal costs. I could keep the Contracting Officer busy 100% of the time and believe that the magnitude of certain Navy programs (such as the S-3A and F-14) would justify collocation of the Contracting Officer function with those PMOs.
- Functional support of the S-3A Project has usually been responsive to Project requirements, but it has also varied from excellent to poor in certain areas. On occasion, it has been necessary to talk with the heads of functional elements or my superiors to obtain more effective support. Because of the importance and magnitude of the S-3A Project, we have probably enjoyed more responsive support from functional elements than some of the other Navy projects, however.
- The general cut back in overall defense spending has had an adverse impact--primarily in the area of technical support. In order to reach arbitrary personnel ceilings, various reductions in force (RIFs), civilian and military, have been imposed, both at the Headquarters and at supporting field organizations. In such a shrinking personnel situation, Project Offices and closely related activities sorely need some special protection from RIFs, bumping chains, and the like.

c. With Staff Specialists--the "Ilities"

The Project Manager observed that there are some documents (such as financial papers) which must go through many layers of authority and that they travel a slow and

tortuous path. He stated that there are still a lot of people with no sense of urgency and still much needless shuffling of paper.

Generally speaking, however, NAVAIR staff specialists and "ility" disciplines (reliability, maintainability, Integrated Logistics Support) are helpful to the S-3A PMO. The PMO stresses reliability and safety and has received useful inputs from NAVAIR "ility" specialists.

In the past, staff specialists at levels of authority above NAVAIR have created S-3A Project delays and disruption. Over the past two or three years, however, the Deputy Secretary's message has influenced most of the staff elements in the OSD and the Military Services, and the PMO today is not often subjected to unreasonable requirements generated by such staff elements. The Project Manager finds that he can usually resolve potential problems in this area by dealing directly with the top official of the staff element.

7. Planning, Directing, and Controlling

a. Formal Plans

The S-3A Specific Operational Requirement (SOR) was developed by OPNAV, with inputs from NAVAIR and the S-3A PMO.

The S-3A PMO prepared or participated in the development and processing of such documents as the:

- Technical Development Plan--Initially prepared by NAVAIR under the supervision of the PMO.
- Project Master Plan--PMO prepared.

- Development Concept Paper (DCP)--Initially prepared by OPNAV and NAVAIR, with inputs from the PMO; updated periodically by the PMO and OPNAV and signed out by the Secretary of the Navy.
- Advance Procurement Plan--Prepared by the Office of the NAVAIR Assistant Commander for Contracts, with inputs from and approval by the PMO.
- Selected Acquisition Reports (SARs)--PMO prepares.

b. Control of Funds

The PMO controls all S-3A Program funds. OSD has deferred S-3A funding in some instances, but such actions have had no significant adverse impact on the Project.

The Project Manager personally signs all Project Directives and controls Project funds tightly to insure that organizations spending S-3A Project money do so with his complete concurrence.

NAVAIR functional organizations (Quality Assurance, reliability) sometimes request support for their activities from S-3A Project funds, based upon work which they believe to be beneficial to the S-3A Project. The Project Manager approves some of those requests and resists others, based upon his evaluation of S-3A needs. Occasionally, these are further negotiated at a higher level.

The position of the Project Manager is that the DCP funding threshold cannot be exceeded under any circumstance.

The Office of the NAVAIR Deputy Commander for Plans & Programs, and Comptroller controls S-3A PMO personnel ceilings and approves PMO travel and overtime expenditures. The Project Manager finds the requirement for approval of PMO travel and overtime to be a minor administrative irritant.

c. Reporting

The Selected Acquisition Report (SAR) is the major reporting requirement. The Project Manager stated that the SAR is the one report on the Project and that all other reports must track with the SAR. It is the only financial report which goes out of the PMO. The Project Manager has resisted efforts to require any additional financial reports from the PMO.

S-3A reporting requirements are not overly burdensome. There has been a considerable relaxation of reporting requirements over the past two or three years.

The Project Manager advised LMI that there has also been a dramatic reduction in briefing requirements as the result of the Deputy Secretary's policies. Previously, there were heavy, formal, stylized briefing requirements--preceded by series of dry runs. Today, those requirements have been replaced by informal, "as needed" meetings. Briefings usually are also informal and seldom preceded by dry runs.

The PMO is not overwhelmed by visitors or correspondence.

d. Changes

The S-3A Charter provides:

The Project Manager shall evaluate and document the effect of proposals to increase or decrease the resources authorized for the execution of the Project and shall determine the effect of the proposed changes on approved cost, schedules, Advance Procurement Plans and performance objectives. The Project Manager's evaluation will be considered by officials having final decision authority during deliberations on Program Change Requests and on the budget.

The CNO shall be informed through channels, including CNM, in any instance where the requirements of the Designated Project cannot be met within the resources and time available.

Under the terms of the S-3A Project Charter, the Project Manager does not have authority to change any delivery schedule or operational use date established by higher authority, and he does not have authority to approve any change degrading mission performance or altering any operational characteristic specified by higher authority.

Within those constraints, however, the S-3A Project Manager has considerable influence with respect to proposed engineering or design changes. A proposed Engineering Change Proposal cannot go before the NAVAIR Configuration Change Control Board without the Project Manager's concurrence. The Project Manager also maintains close control over proposed changes through a close working relationship with the appropriate NAVAIR Class Desk Officer and through his control of funding for proposed changes.

Changes proposed by OPNAV are accommodated providing that (1) they are technically acceptable, (2) funding for the change is available, and (3) there is no danger that any of the S-3A Project DCP thresholds will be threatened. In many cases, the Project Manager has successfully resisted the adoption of changes proposed by Navy organizations or contractors. To date, the Project has not experienced any extremely costly technical changes and has not breached its DCP thresholds.

e. Contracting

The S-3A prime contract was awarded in August 1969. It is a Fixed-Price Incentive Contract with an incentive on costs. It is a multi-year development contract with priced options for production quantities over four fiscal years.

The Request for Proposals (RFP) was prepared under the direction of the Director, Evaluation Division, with the assistance of various other offices within NAVAIR.

The S-3A PMO maintains a close working relationship with the prime contractor and high visibility into that contractor's activities. The Project Manager said that the PMO has a direct telephone line of communication with the prime contractor and the resident Naval Plant Representative's Office in Burbank, California, and that that means of immediate communication is a much more valuable real time management tool than last month's reports.

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